

# Site Investigation Findings Report Tannery Sludge Farm Fields Site Andrew, Buchanan, Clinton and DeKalb Counties, MO Order Numbers: 100129004, 100202002, 100203001 and 100211001

**Site Information:** 

ESP LDPR Code: FEPA8 ESP Staff: Ken Hannon, Sean Counihan, Ben Frissell, &

Pam Hackler

Job Code: NJ10TSFF Investigation Date: 1/25 through 1/28, 2010

#### **Introduction:**

The Missouri Department of Natural Resources (MDNR) Hazardous Waste Program (HWP) requested Environmental Services Program (ESP) personnel to conduct sampling related to an ongoing investigation involving the Prime Tanning Corporation located at 205 Florence Road in St. Joseph, Missouri. This Findings Report is intended as an interim measure to document recent sampling activities. A full project report will be written by the HWP project manager when sample results have been received and evaluated. ESP Environmental Specialists Ken Hannon, Ben Frissell, Pam Hackler, and Sean Counihan traveled to the site on January 25 through 28, 2010, to collect grab samples of soils and a private well water from selected residences and farm fields where tannery sludge was historically applied as a fertilizer. Additional MDNR personnel on site included Valerie Wilder, Michael Stroh, Hillary Wakefield, Paul Embree, and Shelly Jackson with the HWP, site assessment unit. Ray Franson with the MDNR Kansas City Regional Office was also present to assist. Sampling was conducted in accordance with established standard operating procedures (SOPs) within the MDNR, ESP and outlined in the Tannery Sludge Farm Field Sampling and Analysis Plan (SAP), January 14, 2010.

#### **Observations:**

Personnel arrived on-site the afternoon of January 25, 2010, and began sampling agricultural field soils. Custody of all samples collected was maintained by ESP personnel. Weather conditions varied but were predominantly cold with temperatures ranging from morning lows of 16 degrees to afternoon highs around 30 degrees Fahrenheit. Winds were heavy to moderate and from the west to northwest, tapering off towards the afternoons. One private well was resampled to confirm the sample results obtained from sampling conducted on December 16, 2009, (Residence ID number 102). Eleven residential yard decision units (including one background yard), and 19 farm field decision units were also sampled during this event. No deviations from the SAP were noted at any sample locations. Specific information regarding the owner's names and addresses are not documented in this report due to confidentiality concerns. Names and addresses of residents and property owners are kept on file with the HWP project manager.

#### **Field Methods:**

Below is a brief discussion of the sampling activities conducted. A more detailed description of sampling procedures is outlined in the SAP.

Residential yards were divided into Sampling Units (SU) according to each specific site location and recorded on specially designed forms that are on file with the HWP project manager. Five-aliquot Incremental Samples (IS) were collected from within each SU at a depth of 0-2 inches. All soil samples were brought back to the ESP lab and allowed to thaw and dry for at least three days (some samples took four days to dry). All soil samples were then disaggregated and passed through a #60 mesh (0.25mm) sieve. Second-tier Decision Unit Incremental Samples (DUIS) were created using the Sampling Unit Incremental Samples (SUIS), and then all 60 residential yard IS were placed into sample containers and submitted for hexavalent chromium analysis on February 2, 2010.

Farm field samples were collected from the 0-2 inch depth from three SUs in 19 farm field DUs. Each SU was comprised of an acre plot of land within which ten discrete soil samples were collected. Following drying, disaggregation, and sieving, selected soil samples were then analyzed for total chromium with an x-ray fluorescence (XRF) analyzer. The discrete samples were combined to form first-tier SUIS. Second-tier DUIS samples were then created from the SUIS. All IS were then also analyzed by XRF. The resulting 76 SUIS and DUIS farm field samples were then placed into sample containers and submitted for hexavalent chromium analysis on February 11, 2010.

One private well was sampled, plus a duplicate and a field blank. All water samples were shipped overnight to the contract laboratory for hexavalent chromium analysis the same day they were collected. Water samples were also later submitted to the ESP laboratory for total chromium analysis. Water samples collected for total chromium were preserved with nitric acid while samples collected for hexavalent chromium were first filtered then placed into sample containers and preserved in a buffer solution containing ammonium sulfate.

Table 1 is a listing of the samples collected.

	Table 1: Sample Collection Data										
Sample Number	Date Collected	Time Collected	Location Collected & Description								
AB14142	1/26/10	1627	Water grab sample collected from residence 102. Clear, colorless and odorless sample.								
AB14143	1/26/10	1635	Field Blank.								
AB14144	1/26/10	1627	Duplicate of AB14142.								
AB14289	1/27/10	1435	Residential soil composite collected from location ID 319 at Y1.								
AB14290	1/27/10	1440	Residential soil composite collected from location ID 319 at Y2.								
AB14291	1/27/10	1449	Residential soil composite collected from location ID 319 at Y3.								
AB14292	1/27/10	1457	Residential soil composite collected from location ID 319 at Y4.								
AB14293	1/27/10		DUIS of residential yard 319.								
AB14294	1/27/10	1026	Residential soil composite collected from location ID 305 at Y1.								
AB14295	1/27/10	1037	Residential soil composite collected from location ID 305 at Y2.								
AB14296	1/27/10	1046	Residential soil composite collected from location ID 305 at Y3.								
AB14297	1/27/10		DUIS of residential yard 305.								

		7	Table 1: Sample Collection Data
Sample Number	Date Collected	Time Collected	Location Collected & Description
AB14298	1/26/10	1150	Residential soil composite collected from location ID 320 at Y1.
AB14299	1/26/10	1202	Residential soil composite collected from location ID 320 at Y2.
AB14300	1/26/10	1122	Residential soil composite collected from location ID 320 at Y3.
AB14301	1/26/10	1134	Residential soil composite collected from location ID 320 at Y4.
AB14302	1/26/10		DUIS of residential yard 320.
AB14303	1/26/10	0930	Residential soil composite collected from location ID 325 at Y1.
AB14304	1/26/10	0910	Residential soil composite collected from location ID 325 at Y2.
AB14305	1/26/10	0900	Residential soil composite collected from location ID 325 at Y3.
AB14306	1/26/10	0920	Residential soil composite collected from location ID 325 at Y4.
AB14307	1/26/10		DUIS of residential yard 325.
AB14308	1/26/10	0940	Residential soil composite collected from location ID 326 at Y1.
AB14309	1/26/10	0950	Residential soil composite collected from location ID 326 at Y2.
AB14310	1/26/10	1000	Residential soil composite collected from location ID 326 at Y3.
AB14311	1/26/10	1010	Residential soil composite collected from location ID 326 at Y4.
AB14312	1/26/10		DUIS of residential yard 326.
AB14313	1/27/10	0820	Residential soil composite collected from location ID 312 at Y1.
AB14314	1/27/10	0835	Residential soil composite collected from location ID 312 at Y2.
AB14315	1/26/10	0850	Residential soil composite collected from location ID 312 at Y3.
AB14316	1/26/10		DUIS of residential yard 312.
AB14317	1/26/10	1525	Residential soil composite collected from location ID 313 at Y1.
AB14318	1/26/10	1530	Residential soil composite collected from location ID 313 at Y2.
AB14319	1/26/10	1535	Residential soil composite collected from location ID 313 at Y3.
AB14320	1/26/10	1545	Residential soil composite collected from location ID 313 at Y4.
AB14321	1/26/10		DUIS of residential yard 313.
AB14322	1/27/10	1435	Residential soil composite collected from location ID 301 at Y1.
AB14323	1/27/10	1440	Residential soil composite collected from location ID 301 at Y2.
AB14324	1/27/10	1449	Residential soil composite collected from location ID 301 at Y3.
AB14325	1/27/10	1457	Residential soil composite collected from location ID 301 at Y4.
AB14326	1/27/10		DUIS of residential yard 301.
AB14327	1/27/10	1430	Residential soil composite collected from location ID 304 at Y1.
AB14328	1/27/10	1434	Residential soil composite collected from location ID 304 at Y1, replicate #1.
AB14329	1/27/10	1438	Residential soil composite collected from location ID 304 at Y1, replicate #2.
AB14330	1/27/10	1440	Residential soil composite collected from location ID 304 at Y2.
AB14331	1/27/10	1450	Residential soil composite collected from location ID 304 at Y3.
AB14332	1/27/10	1500	Residential soil composite collected from location ID 304 at Y4.
AB14333	1/27/10		DUIS of residential yard 304.
AB14334	1/27/10	1500	Residential soil composite collected from location ID 303 at Y1.
AB14335	1/27/10	1510	Residential soil composite collected from location ID 303 at Y2.
AB14336	1/27/10	1520	Residential soil composite collected from location ID 303 at Y3.
AB14337	1/27/10	1530	Residential soil composite collected from location ID 303 at Y4.
AB14338	1/27/10		DUIS of residential yard 303.
AB14339	1/27/10	1254	Residential soil composite collected from location ID 306 at Y1.
AB14340	1/27/10	1302	Residential soil composite collected from location ID 306 at Y2.
AB14341	1/27/10	1310	Residential soil composite collected from location ID 306 at Y3.
AB14342	1/27/10		DUIS of residential yard 306.
AB14343	1/26/10	1610	Residential soil composite collected from location ID 302 at Y1.
AB14344	1/26/10	1615	Residential soil composite collected from location ID 302 at Y2.
AB14345	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3.
AB14346	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3. replicate #1

Sample Number   Collected Number   Collected Collected   Collect			7	Γable 1: Sample Collection Data
AB14347				Location Collected & Description
AB14494   1/26/10   1415   Farm field soil location ID 203, SUIS 59.				Residential soil composite collected from location ID 302 at V3_replicate #2_
AB14405				1
AB14405   1/26/10   1530   Farm field soil location ID 203, SUIS 18.				·
AB14406				
AB14407   1/26/10   1100   Farm field soil location ID 205, SUIS 96.				
AB14408				
AB14409   1/26/10   1200   Farm field soil location ID 210, SUIS 30.				· ·
AB14410				,
AB14411   1/26/10   1600   Farm field soil location ID 213, SUIS 44.   AB14412   1/27/10   1046   Farm field soil location ID 214, SUIS 25.   AB14414   1/26/10   1540   Farm field soil location ID 215, SUIS 55.   AB14414   1/26/10   1540   Farm field soil location ID 216, SUIS 50.   AB14415   1/26/10   0940   Farm field soil location ID 217, SUIS 103.   AB14416   1/26/10   0940   Farm field soil location ID 218, SUIS 146.   AB14417   1/26/10   0990   Farm field soil location ID 219, SUIS 55.   AB14418   1/25/10   1704   Farm field soil location ID 221, SUIS 150.   AB14419   1/25/10   1658   Farm field soil location ID 222, SUIS 150.   AB14420   1/26/10   1444   Farm field soil location ID 202, SUIS 29.   AB14421   1/26/10   1415   Farm field soil location ID 202, SUIS 79.   **AB14423   1/27/10   1530   Farm field soil location ID 203, SUIS 7.   AB14424   1/27/10   1530   Farm field soil location ID 203, SUIS 7.   AB14424   1/27/10   1530   Farm field soil location ID 203, SUIS 7.   AB14427   1/27/10   1256   Farm field soil location ID 203, SUIS 9.   AB14427   1/27/10   1256   Farm field soil location ID 204, SUIS 9.   AB14428   1/27/10   1256   Farm field soil location ID 204, SUIS 9.   AB14430   1/26/10   1120   Farm field soil location ID 204, SUIS 9.   AB14431   1/26/10   1120   Farm field soil location ID 205, SUIS 71.   AB14430   1/26/10   1120   Farm field soil location ID 205, SUIS 14.   AB14431   1/26/10   1100   Farm field soil location ID 209, SUIS 14.   AB14431   1/26/10   1100   Farm field soil location ID 209, SUIS 18.   AB14433   1/25/10   1400   Farm field soil location ID 209, SUIS 18.   AB14431   1/26/10   1500   Farm field soil location ID 209, SUIS 18.   AB14433   1/25/10   1400   Farm field soil location ID 209, SUIS 18.   AB14431   1/26/10   1500   Farm field soil location ID 210, SUIS 62.   *AB14438   1/27/10   1000   Farm field soil location ID 210, SUIS 63.   AB14431   1/26/10   1600   Farm field soil location ID 210, SUIS 64.   AB14431   1/26/10   1600   Farm field soil location ID 2				· ·
AB14412				· ·
AB14413   1/27/10   1540   Farm field soil location ID 215, SUIS 55.				
AB14414   1/26/10   1540   Farm field soil location ID 216, SUIS 50.				
AB14415				· ·
AB14416				,
AB14417   1/26/10   0900   Farm field soil location ID 219, SUIS 55.				
AB14418			1	· · · · · · · · · · · · · · · · · · ·
AB14419   1/25/10   1658   Farm field soil location ID 222, SUIS 41.				
AB14420				
AB14421			1	
*AB14422         1/26/10         1415         Farm field soil location ID 202, DUIS.           AB14423         1/27/10         1530         Farm field soil location ID 203, SUIS 7.           AB14424         1/27/10         1530         Farm field soil location ID 203, SUIS 27.           *AB14425         1/27/10         1530         Farm field soil location ID 203, DUIS.           AB14426         1/27/10         1256         Farm field soil location ID 204, SUIS 99.           AB14427         1/27/10         1350         Farm field soil location ID 204, SUIS 99.           AB14428         1/27/10         1256         Farm field soil location ID 204, SUIS 23.           *AB14428         1/27/10         1256         Farm field soil location ID 204, DUIS.           AB14430         1/26/10         1120         Farm field soil location ID 205, SUIS 71.           AB14431         1/26/10         1100         Farm field soil location ID 205, SUIS 34.           AB14432         1/25/10         1400         Farm field soil location ID 209, SUIS 138.           AB14433         1/25/10         1405         Farm field soil location ID 209, SUIS 144.           *AB14434         1/25/10         1400         Farm field soil location ID 210, SUIS 15.           AB14435         1/26/10         1530         Farm			1	,
AB14423			1	
AB14424         1/27/10         1530         Farm field soil location ID 203, SUIS 27.           *AB14425         1/27/10         1530         Farm field soil location ID 203, DUIS.           AB14426         1/27/10         1256         Farm field soil location ID 204, SUIS 99.           AB14427         1/27/10         1350         Farm field soil location ID 204, SUIS 23.           *AB14428         1/27/10         1256         Farm field soil location ID 204, DUIS.           AB14429         1/26/10         1120         Farm field soil location ID 205, SUIS 71.           AB14430         1/26/10         1100         Farm field soil location ID 205, SUIS 34.           AB14431         1/26/10         1100         Farm field soil location ID 205, DUIS.           AB14432         1/25/10         1400         Farm field soil location ID 209, SUIS 138.           AB14433         1/25/10         1405         Farm field soil location ID 209, BUIS 144.           *AB14434         1/25/10         1400         Farm field soil location ID 209, BUIS 15.           AB14435         1/26/10         1530         Farm field soil location ID 210, SUIS 62.           *AB14434         1/26/10         150         Farm field soil location ID 210, SUIS 62.           *AB14437         1/26/10         150         Farm				
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AB14433         1/25/10         1405         Farm field soil location ID 209, SUIS 144.           *AB14434         1/25/10         1400         Farm field soil location ID 209, DUIS.           AB14435         1/26/10         1530         Farm field soil location ID 210, SUIS 15.           AB14436         1/26/10         1600         Farm field soil location ID 210, DUIS.           *AB14437         1/26/10         150         Farm field soil location ID 210, DUIS.           AB14438         1/27/10         0948         Farm field soil location ID 212, SUIS 16.           AB14439         1/27/10         1030         Farm field soil location ID 212, SUIS 86.           AB14440         1/27/10         0902         Farm field soil location ID 213, SUIS 9.           AB14441         1/26/10         1600         Farm field soil location ID 213, SUIS 9.           AB14442         1/26/10         1626         Farm field soil location ID 213, SUIS 15.           AB14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	AB14431	1/26/10	1100	· ·
*AB14434       1/25/10       1400       Farm field soil location ID 209, DUIS.         AB14435       1/26/10       1530       Farm field soil location ID 210, SUIS 15.         AB14436       1/26/10       1600       Farm field soil location ID 210, SUIS 62.         *AB14437       1/26/10       150       Farm field soil location ID 210, DUIS.         AB14438       1/27/10       0948       Farm field soil location ID 212, SUIS 16.         AB14439       1/27/10       1030       Farm field soil location ID 212, SUIS 86.         AB14440       1/27/10       0902       Farm field soil location ID 213, SUIS 9.         AB14441       1/26/10       1600       Farm field soil location ID 213, SUIS 15.         AB14442       1/26/10       1600       Farm field soil location ID 213, DUIS.         AB14443       1/26/10       1600       Farm field soil location ID 214, SUIS 53.         AB14444       1/27/10       1118       Farm field soil location ID 214, SUIS 23.         AB14445       1/27/10       1210       Farm field soil location ID 214, DUIS.	AB14432	1/25/10	1400	Farm field soil location ID 209, SUIS 138.
AB 14435         1/26/10         1530         Farm field soil location ID 210, SUIS 15.           AB 14436         1/26/10         1600         Farm field soil location ID 210, SUIS 62.           *AB 14437         1/26/10         150         Farm field soil location ID 210, DUIS.           AB 14438         1/27/10         0948         Farm field soil location ID 212, SUIS 16.           AB 14439         1/27/10         1030         Farm field soil location ID 212, SUIS 86.           AB 14440         1/27/10         0902         Farm field soil location ID 213, SUIS 9.           AB 14441         1/26/10         1600         Farm field soil location ID 213, SUIS 15.           AB 14442         1/26/10         1600         Farm field soil location ID 213, DUIS.           AB 14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB 14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB 14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	AB14433	1/25/10	1405	Farm field soil location ID 209, SUIS 144.
AB14436         1/26/10         1600         Farm field soil location ID 210, SUIS 62.           *AB14437         1/26/10         150         Farm field soil location ID 210, DUIS.           AB14438         1/27/10         0948         Farm field soil location ID 212, SUIS 16.           AB14439         1/27/10         1030         Farm field soil location ID 212, SUIS 86.           AB14440         1/27/10         0902         Farm field soil location ID 213, DUIS           AB14441         1/26/10         1600         Farm field soil location ID 213, SUIS 9.           AB14442         1/26/10         1626         Farm field soil location ID 213, SUIS 15.           AB14443         1/26/10         1600         Farm field soil location ID 213, DUIS.           AB14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	*AB14434	1/25/10	1400	Farm field soil location ID 209, DUIS.
*AB14437         1/26/10         150         Farm field soil location ID 210, DUIS.           AB14438         1/27/10         0948         Farm field soil location ID 212, SUIS 16.           AB14439         1/27/10         1030         Farm field soil location ID 212, SUIS 86.           AB14440         1/27/10         0902         Farm field soil location ID 212, DUIS           AB14441         1/26/10         1600         Farm field soil location ID 213, SUIS 9.           AB14442         1/26/10         1626         Farm field soil location ID 213, SUIS 15.           AB14443         1/26/10         1600         Farm field soil location ID 213, DUIS.           AB14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	AB14435	1/26/10	1530	Farm field soil location ID 210, SUIS 15.
AB 14438         1/27/10         0948         Farm field soil location ID 212, SUIS 16.           AB 14439         1/27/10         1030         Farm field soil location ID 212, SUIS 86.           AB 14440         1/27/10         0902         Farm field soil location ID 212, DUIS           AB 14441         1/26/10         1600         Farm field soil location ID 213, SUIS 9.           AB 14442         1/26/10         1626         Farm field soil location ID 213, SUIS 15.           AB 14443         1/26/10         1600         Farm field soil location ID 213, DUIS.           AB 14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB 14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB 14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	AB14436	1/26/10	1600	Farm field soil location ID 210, SUIS 62.
AB 14439       1/27/10       1030       Farm field soil location ID 212, SUIS 86.         AB 14440       1/27/10       0902       Farm field soil location ID 212, DUIS         AB 14441       1/26/10       1600       Farm field soil location ID 213, SUIS 9.         AB 14442       1/26/10       1626       Farm field soil location ID 213, SUIS 15.         AB 14443       1/26/10       1600       Farm field soil location ID 213, DUIS.         AB 14444       1/27/10       1118       Farm field soil location ID 214, SUIS 53.         AB 14445       1/27/10       1210       Farm field soil location ID 214, SUIS 23.         AB 14446       1/27/10       1118       Farm field soil location ID 214, DUIS.	*AB14437	1/26/10	150	Farm field soil location ID 210, DUIS.
AB 14440         1/27/10         0902         Farm field soil location ID 212, DUIS           AB 14441         1/26/10         1600         Farm field soil location ID 213, SUIS 9.           AB 14442         1/26/10         1626         Farm field soil location ID 213, SUIS 15.           AB 14443         1/26/10         1600         Farm field soil location ID 213, DUIS.           AB 14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB 14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB 14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	AB14438	1/27/10	0948	Farm field soil location ID 212, SUIS 16.
AB14441         1/26/10         1600         Farm field soil location ID 213, SUIS 9.           AB14442         1/26/10         1626         Farm field soil location ID 213, SUIS 15.           AB14443         1/26/10         1600         Farm field soil location ID 213, DUIS.           AB14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	AB14439	1/27/10	1030	Farm field soil location ID 212, SUIS 86.
AB14442         1/26/10         1626         Farm field soil location ID 213, SUIS 15.           AB14443         1/26/10         1600         Farm field soil location ID 213, DUIS.           AB14444         1/27/10         1118         Farm field soil location ID 214, SUIS 53.           AB14445         1/27/10         1210         Farm field soil location ID 214, SUIS 23.           AB14446         1/27/10         1118         Farm field soil location ID 214, DUIS.	AB14440	1/27/10	0902	Farm field soil location ID 212, DUIS
AB14443       1/26/10       1600       Farm field soil location ID 213, DUIS.         AB14444       1/27/10       1118       Farm field soil location ID 214, SUIS 53.         AB14445       1/27/10       1210       Farm field soil location ID 214, SUIS 23.         AB14446       1/27/10       1118       Farm field soil location ID 214, DUIS.	AB14441	1/26/10	1600	Farm field soil location ID 213, SUIS 9.
AB14443       1/26/10       1600       Farm field soil location ID 213, DUIS.         AB14444       1/27/10       1118       Farm field soil location ID 214, SUIS 53.         AB14445       1/27/10       1210       Farm field soil location ID 214, SUIS 23.         AB14446       1/27/10       1118       Farm field soil location ID 214, DUIS.	AB14442	1/26/10	1626	Farm field soil location ID 213, SUIS 15.
AB14444       1/27/10       1118       Farm field soil location ID 214, SUIS 53.         AB14445       1/27/10       1210       Farm field soil location ID 214, SUIS 23.         AB14446       1/27/10       1118       Farm field soil location ID 214, DUIS.		1/26/10		Farm field soil location ID 213, DUIS.
AB14445 1/27/10 1210 Farm field soil location ID 214, SUIS 23.  AB14446 1/27/10 1118 Farm field soil location ID 214, DUIS.				Farm field soil location ID 214, SUIS 53.
AB14446 1/27/10 1118 Farm field soil location ID 214, DUIS.				Farm field soil location ID 214, SUIS 23.
AB14447   1/27/10   1110   Farm field soil location ID 215, SUIS 82.				
AB14448 1/27/10 1046 Farm field soil location ID 215, SUIS 110.				
AB14449 1/27/10 1046 Farm field soil location ID 215, DUIS.				
AB14450 1/26/10 1540 Farm field soil location ID 216, SUIS 32.				

		7	Table 1: Sample Collection Data
Sample Number	Date Collected	Time Collected	Location Collected & Description
AB14451	1/26/10	1603	Farm field soil location ID 216, SUIS 16.
*AB14452	1/26/10	1540	Farm field soil location ID 216, DUIS.
AB14453	1/26/10	1321	Farm field soil location ID 217, SUIS 22.
AB14454	1/26/10	1147	Farm field soil location ID 217, SUIS 50.
AB14455	1/26/10	1245	Farm field soil location ID 217, DUIS.
AB14456	1/26/10	1055	Farm field soil location ID 218, SUIS 102.
AB14457	1/26/10	0940	Farm field soil location ID 218, SUIS 87.
AB14458	1/26/10	0940	Farm field soil location ID 218, DUIS.
AB14459	1/26/10	1255	Farm field soil location ID 219, SUIS 42.
AB14460	1/26/10	0900	Farm field soil location ID 219, SUIS 15.
*AB14461	1/26/10	0900	Farm field soil location ID 219, DUIS.
AB14462	1/25/10	1704	Farm field soil location ID 221, SUIS 164.
AB14463	1/25/10	1730	Farm field soil location ID 221, SUIS 109.
*AB14464	1/25/10	1704	Farm field soil location ID 221, DUIS.
AB14465	1/25/10	1710	Farm field soil location ID 222, SUIS 10.
AB14466	1/25/10	1730	Farm field soil location ID 222, SUIS 27.
*AB14467	1/25/10	1658	Farm field soil location ID 222, DUIS.
AB14468	1/27/10	0940	Farm field soil location ID 224, SUIS 19.
AB14469	1/27/10	0900	Farm field soil location ID 224, SUIS 23.
AB14470	1/27/10	0920	Farm field soil location ID 224, SUIS 74.
*AB14471	1/27/10	0900	Farm field soil location ID 224, DUIS.
AB14472	1/26/10	1210	Farm field soil location ID 223, SUIS 4.
AB14473	1/26/10	1240	Farm field soil location ID 223, SUIS 28.
AB14474	1/26/10	1210	Farm field soil location ID 223, DUIS.
AB14475	1/26/10	1650	Farm field soil location ID 225, SUIS 60.
AB14476	1/26/10	1120	Farm field soil location ID 225, SUIS 8.
AB14477	1/26/10	1020	Farm field soil location ID 225, DUIS.
AB14478	1/26/10	1322	Farm field soil location ID 223, SUIS 44.
AB14479	1/26/10	1020	Farm field soil location ID 225, SUIS 32.
AB14350	1/26/10	1057	Farm field soil location ID 218, SU 102.02.
AB14351	1/26/10	0946	Farm field soil location ID 218, SU 87.04.
AB14352	1/26/10	1200	Farm field soil location ID 202, SU 59.09.
AB14353	1/26/10	1150	Farm field soil location ID 202, SU 59.07.
AB14354	1/26/10	1310	Farm field soil location ID 202, SU 79.03.
AB14355	1/26/10	1330	Farm field soil location ID 218, SU 146.08.

<sup>\*</sup> Denotes samples that were held at the request of HWP for possible later analysis. These samples will not appear in the analytical results section of this report.

Submitted by:

Kenneth Hannon

Kenneth Hannon
Environmental Specialist
Field Services Unit
Environmental Services Program

Approved by:

Digitally signed by Eric Sappington
DN: cn=Eric Sappington, c=US, o=Environmental Services
Program, ou=Department of
Natural Resources, email=eric.
sappington@dnr.mo.gov
Date: 2010.03.25 10:25:19
-05'00'

Eric Sappington
Unit Chief
Field Services Unit
Environmental Services Program

ES:khd

Michael Stroh, Environmental Specialist, HWP

### APPENDIX A

## Chain of Custody/Analytical Results

Tannery Sludge Farm Fields Site Andrew, Buchanan, Clinton and DeKalb Counties, MO

## MISSOURI DEPARTMENT OF NATURAL RESOURCES

## FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

			DEPARTMET  T AND CH					Page 1 of 2  LABORATORY ORDER ID: 1002/100/				
Collector's Name:	1/	<u>. 11</u>					<del></del>		Descript	ion of Shipment		
(Please Print)			tonno					Shipped-Carrier:				
Affiliation: (circle one)	ESP DGLS	KCRO HWP	NERO Other:	SERO	SLRO	SWRO	WPP	Tape sealed and in X Hand Delivered	nitialed	No. Of 0	Containers:	
	Sample							Sample		For Lab Use (		
Sample Number	Collected			Anal	<b>yse</b> s			Туре	Matrix	Container		Preserved
	Date:	Hexavalent C	Chromium , TO	OC, pH,			-		Water	1L amber 1	20 mL	H <sub>2</sub> SO <sub>4</sub>
1006354	3	B .	sture, ORP, To	-	Mn, Mo, V, A	Al)		Grab	Soil	Cubitainer		HNO 3
1	1-26-10							x Composite	<b>Organic</b>	2 oz glass Nalg	<b>—</b>	NAOH
(Sample A)			r=-	1 == -	T	r	1	Modified	Sludge	<b>⊢</b>		HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:			4° C(None)
AB 14404	1415							ļ	1	Encore 2 VOther: 2 Place	250mL	Disinfected Other
	Date:	Havayalant (	Chromium , TO	)C pH					Water		20 mL	$H_2SO_4$
1000355		1	sture, ORP, To		Mn. Mo. V. A	<b>A</b> I)		Grab	Soil	Cubitainer		HNO 3
1000202	1-26-10		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,, . , .	/		x Composite	Organic	2 oz glass Nalg	zene	NAOH
(Sample B)								Modified	Sludge	<b>—</b>	$\Gamma_L$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial 5	500mL 🚄	4° C(None)
0011100	1530		l	Į							250mL	Disinfected
AB14405					<u> </u>	<u></u>			<u>_</u>	1 Other: 2 101.01		Other
	Date:		Chromium , TO	-					Water	<del></del>	20 mL	$H_2SO_4$
1000356	1-27-10	Percent Mois	sture, ORP, To	tal Metals (Fe,	Mn, Mo, V,	Al)		Grab .	Soil	Cubitainer	<u> </u>	HNO <sub>3</sub>
(Sample C)								x Composite  Modified	Organic Sludge	2 oz glass Nalg	zene L	NAOH HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp	Other:	Other:	Other:	<del>-</del> -		4° C(None)
	11	<b>D</b> .0	I low	pri	Spec. Cond.	Tomp.	ouici.	— outer.	omer.		250mL	Disinfected
AB14#06	1256									Other: 21plac		- Other
	Date:	Hexavalent (	Chromium , TO	OC, pH,					Water		120 mL	$H_2SO_4$
Immorn		Percent Mois	sture, ORP, To	tal Metals (Fe,	Mn, Mo, V,	<b>A</b> 1)		Grab	Soil	Cubitainer		HNO 3
1000057	1-26-1	P 17.	a_1 in	- T	- /	-4+-	- 1 .	x Composite	Organic	2 oz glass Nalg		NAOH _
(Sample D)								Modified	Sludge	<u> </u>	IL _	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:			4° C(None)
AR14407	1100									Encore Other: 2: place	250mL -	_Disinfected Other
Relinquished By:			<del>!</del>	<u> </u>	Received By	i a EX			Date:		Time:	
16	nmin	`	necested by			(E)	[ 2-11	1-10	10:	58		
Relinquished By:					Received By:				Date:		Time:	
					,							
Relinquished By:					Received By	<b>:</b>			Date:	Î	Гime:	
									<u> </u>			

Sample I.D. Letter		Site Descripti	ion			: <del>-</del> : -
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, statio	County: (Multi on number, sample	iple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>A</b>	GPS Coordinates (Record Coordin	Sample Reference ID:				
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, statio	County: (Multi on number, sample	iple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	LDPR Code: FEPA8  204 Since Si	Job Code: NJ10 TSFF			
C		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:	
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, statio	County: (Multion number, sample	iple)	LDPR Code: FEPA8 ins 205 S <del>UI</del> S	Job Code: NJ10 TSFF
D	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:	
REMARKS: HWP: Michael St	troh					

## Page 1 of 2

# MISSOURI DEPARTMENT OF NATURAL RESOURCES FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

Collector's Name (Please Print)	· }	len	Hann	10 N			Description of Shipment Shipped-Carrier:				
		KCRO HWP	NERO Other:	SERO	SLRO	SWRO	WPP	Tape sealed and i	nitialed	No. Of Co	ontainers: 8
Sample Number	Sample Collected			Anal	yses			Sample Type	Matrix	For Lab Use O	nly Preserved
1006358	Date:	Percent Mois	Chromium, To	OC. pH, tal Metals (Fe,	Mn, Mo, V, A	al)		Grab x Composite	Water Soil Organic		$ \begin{array}{c c} 0 \text{ mL} & H_2 SO_4 \\ \hline HNO_3 \end{array} $
(Sample A)								Modified	Sludge	i 8 oz glass 1L	HCL
For Lab Use Only AB14408	Time: 1400	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:		0mL 24° C(None) 0mL Disinfected Other
1000 359 (Sample B)	Date: \- 26~10	Percent Mois	Chromium, To	OC, pH. tal Metals (Fe,	Mn, Mo, V, A	\d)		Grab x Composite Modified	Water √Soil Organic Sludge		0 mL H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> ne NAOH
For Lab Use Only AB14409	Time: 1200	D.O	Flow	рН	Spec Cond.	Temp.	Other:	Other:	Other:	Encore 25  Other: Zislack	
(CO)360 (Sample C)	Date:	Percent Mois	Chromium, To sture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A		only)	Grab x Composite Modified	Water Soil Organic Sludge	IL amber 120 mL Cubitainer 2 oz glass Nalgene 8 oz glass 1L	ne HNO 3 NAOH HCL
For Lab Use Only AB/44/0	Time: 0902	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:		0mL Z 4° C(None) 0mL Disinfected Contact Other
(Sample D)	Date: [-76-10	Percent Mois	Chromium, To sture, ORP, To ZUN	OC, pH, tal Metals (Fe,	Mn, Mo, V, A	(Cr 6	+ mly	Grab x Composite Modified	Water ✓ Soil Organic Sludge	IL amber 12 Cubitainer 2 oz glass Nalge 8 oz glass 1L	HCL
For Lab Use Only AB144 [[	Time:	D.O	Flow	рН	Spec. Cond.		Other:	Other:	Other:		0mL 4° C(None) 0mL Disinfected Other
Relinquished By:	innet	h Ha	nno		Received By	da	TIONA	6V	Date: Q -	1-10	me: 1058
Relinquished By:					Received By	:	, , ,		Date:	Ti	me:
Relinquished By:					Received By				Date:	Ti	me:

Sample I.D. Letter		Site Descripti	ion					
Sample A	` ` `	Site/Study Name:  Tannery Sludge Farm Fields  e where and how the sample was collected, statio	County: (Multiple) on number, sample type		LDPR Code: FEPA8	Job Code: NJ10 TSFF		
A		nates in UTM Zone 15 NAD 83 Only):  Y Northing.	EP	eck one) E (meters) OP	Sample Reference ID:			
Sample	Facility ID:  Sample Comment (briefly describe	Tannery Sludge Farm Fields	Tannery Sludge Farm Fields (Multiple) and how the sample was collected, station number, sample type, etc.):					
В		nates in UTM Zone 15 NAD 83 Only): Y Northing	<del></del>	E (meters)	Sample Reference ID:			
Sample	Facility ID:  Sample Comment (briefly describe		LDPR Code: FEPA8	Job Code: NJ10 TSFF				
C		nates in UTM Zone 15 NAD 83 Only):  Y Northing		E (meters)	Sample Reference ID:			
-	F::4. ID.		LDPR Code:	Job Code:				
Sample	i	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, statio	County: (Multiple) on number, sample type		FEPA8	NJ10 TSFF		
n d	Sample Comment (briefly describe  GPS Coordinates (Record Coordin	Tannery Sludge Farm Fields where and how the sample was collected, statio	(Multiple) on number, sample type Accuracy (che	eck one) E (meters)				

### Page 1 of 2

# MISSOURI DEPARTMENT OF NATURAL RESOURCES FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

Collector's Name	Z	en t	\	~				Description of Shipmen Shipped-Carrier:				
(Please Print) Affiliation:			\a\n\r\ nero	SERO	SLRO	SWRO .	WPP	Tape sealed and in				
(circle one)	DGLS	HWP	Other:	SERU				x Hand Delivered	^		Containers: 8	
G. I.N.	Sample							Sample	For Lab Use Only			
Sample Number	Collected		Analyses						Matrix	Container	Preserved	
	Date:	Hexavalent C	hromium, TO	OC, pH,					Water	1L amber1.	20 mL H <sub>2</sub> SO <sub>4</sub>	
1000362	, , , , , ,	Percent Mois	ture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	\l)		Grab	<b>✓</b> Soil	Cubitainer	$\square$ HNO $_3$	
	1-21-14	1	7.1.1	0. 0	7.0	C 6+	-LJ	x Composite	Organic	2 oz glass Nalg		
(Sample A)			200 (	~44D	MAP	Cr c	WIN)	Modified	<b>Slu</b> dge	1 8 oz glass1.		
For Lab Use Only		D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	<u> </u>	00mL $24^{\circ}$ C(None)	
001111112	1118										50mLDisinfected	
AB14412				<u> </u>						Other: Zin oct		
	Date:		Chromium , TO						Water		$\begin{array}{c c} 20 \text{ mL} & H_2 SO_4 \end{array}$	
1000363	1-27 18	Percent Mois	ture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	(I)		Grab	✓ Soil	Cubitainer	HNO 3	
	1-27-10		RILW	LAR	Dia	(C.6+	l	x Composite	Organic Control	2 oz glass Nalg		
(Sample B)			1 10 - 10		) SALV	<u> </u>	1 ( ) NO	Modified	Sludge	<u> </u>	L HCL	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:		00mL 24° C(None)	
AB144/3	1046			ļ	ţ	1			Į.		50mL Disinfected	
כודדומוז				<u></u>			<u> </u>			Other 2 place		
,	Date:	1	Chromium , TO			. •.			Water		$H_2SO_4$	
1000364	1-26-10	Percent Mois	sture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	AI)		Grab .	✓ Soil	Cubitainer	HNO 3	
	,	ــــــــــــــــــــــــــــــــــــــ	<del>Literal - 1</del>	-AR T	7 D 4	· <del>***</del>		x Composite	Organic	2 oz glass Nalg		
(Sample C)	Ti:	7	151	1,7,5	<u> </u>	<b>T</b>	Tou	Modified	Sludge	<u> </u>	L HCL	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:		00mL 4° C(None)	
AB14414	1540						į				50mL Disinfected Other	
715) [ 1 1 ]	D-4	T. 1	1	<u> </u>	<u> </u>		<u> </u>		W.	Other: Zioloc		
	Date:		Chromium , To		N. N N.	. IN			Water	<u> </u>	$ \begin{array}{c c} 20 \text{ mL} & H_2 SO_4 \\ \hline HNO_3 \end{array} $	
11000365	1-26-10	Percent Mois	iure, OKP, 10	tal Metals (Fe,	IVIN, IVIO, V, A	AI)		Grab	√ Soil	Cubitainer	<u> </u>	
(Sample D)	( 02 10	]	Kun	LAB	Duo	( C c 6	only)	x Composite  Modified	Organic Sludge	2 oz glass Nalg	rene NAOH L HCL	
	Time:	D.O	Flow	pH	Spec. Cond.	Tomp	Other:	Other:	Other:	<b>⊢∸</b>	$00mL \qquad \begin{array}{c} ICL \\ O0mL \qquad \begin{array}{c} ICL \\ OOme \end{array}$	
For Lab Use Only		D.0	FIOW	lbu	Spec. Cond.	remp.	Other.	- Other.	Other.		50mL Disinfected	
AB14415	1245			,					1	Other 20 lock	Other	
Relinguished By:		. / 1 /		<del></del>	Received By	:A (cs)	1		Date:	т 1	ime:	
	innet	L Ha	nnall	(	1/1/24	Va	Thomas	MOY	2-11	·-10	1058	
Relinquished By:			, -, , -, -,		Received By	:	1		Date:		ime:	
5 11 15					 				-		7.	
Relinquished By:					Received By	:			Date:	[]	ime:	
					<u> </u>							

Sample I.D. Letter		Site Descript	ion			
Sample	• •	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Mul n number, sampl	tiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>A</b>	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):  **Y Northing**	Accuracy	(check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	•	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Mul- n number, sampl	tiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В	GPS Coordinates (Record Coordin X Easting	ates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:	
Sample	Facility ID: Sample Comment (briefly describe	tiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF		
C		ates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID: Sample Comment (briefly describe	tiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF		
D REMARKS:		ates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:	



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Collector's Name (Please Print)		Len	Hav	ノアのハ	` <u></u>	i.	<del></del>	Shipped-Carrier:	Description of Shipment		
	ESP DGLS	KCRO	NERO Other:	SERO	SLRO	SWRO	WPP	Tape sealed and i	nitialed	No. Of	Containers: 8
Sample Number	Sample			Anal	vses			Sample		For Lab Use	<u>Only</u>
	Collected					·		Туре	Matrix	Container	Preserved
	Date:		Chromium, TO	•					Water	_	$H_2SO_4$
100036	1-26-11	Percent Mois	ture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	Al)		Grab	Soil	Cubitainer	HNO 3
(Sample A)	1							x Composite  Modified	Organic Sludge		gene NAOH IL HCL
For Lab Use Only	Time:	D.O	Flow	На	Spec. Cond.	Temp	Other:	Other:	Other:		500mL \\ \overline{\partial} 4° C(None)
			1.0 //	,	Speed Contain	· ·····p·		_ ~•			250mL Disinfected
AB14416	0940									1 Other: 21plac	
	Date:		Chromium , TO		<del> </del>				Water	IL amber	$120 \text{ mL}  H_2 SO_4$
100001-1		1	ture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	M)		Grab	✓ Soil	<b>Cu</b> bita <b>iner</b>	$\square$ HNO 3
100007	1-26-10	1						x Composite	Organic		gene NAOH
(Sample B)	-	D 0	I	T			la.	Modified	Sludge	<u> </u>	1L HCL
For Lab Use Only	Time:	l .	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:		500mL
AB14417	0900	1	}	}	1		ļ		l	Encore Other: 210 oc	250mL Disinfected Other
	Date:	Havayalant (	Chromium, TO	)C -5U			<u> </u>		Water		$120 \text{ mL}$ $H_2SO_4$
10000	Date.		sture, ORP, To		Mn. Mo. V. A	AD.		Grab	Soil	Cubitainer —	$-\frac{120 \text{ mL}}{\text{HNO}_3}$
100568	1-25-10	7	,,	17201015 (1 5,	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		x Composite	Organic	_	gene NAOH
(Sample C)								Modified	Sludge		IL HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL 24° C(None)
NAULULIA	1764										250mL Disinfected
AB14418										1 Other: 2, plac	
£	Date:	Hexavalent C	Chromium, TO	)C, pH,		. 4.			Water		$H_2SO_4$
1000360	1. 20	Percent Mois	sture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	AI)		Grab	Soil	Cubitainer	HNO 3
(Sample D)	1658 KH	]						x Composite  Modified	Organic Sludge		gene NAOH 1L HCL
For Lab Use Only	Time:		Flow	рН	Spec. Cond.	Temp	Other:	Other:	Other:	<u> </u>	$ \begin{array}{c c} 1L & HCL \\ \hline 500mL & 4^{\circ}C(None) \end{array} $
		D.0	1100	pri	Spec. Cond.	Temp.	Other.	- Ounci.	— Other.		250mL Disinfected
AB14419	1658									1 Other 2 place	
Relinquished By:	mi	+1 H	mn	7	Regented By	NO7	long	NOW	Date:		Time: 1058
Relinquished By:	TYTU	1.16	V WIVIUU	<u> </u>	Received By	<u>~u &gt; v</u> :	N 9 . 10 12	<del> </del>	Date:		Time:
• • • • • •							•				
Relinquished By:					Received By	:	· · · · · · · · · · · · · · · · · · ·		Date:		Time:
					<u></u>		·		<u> </u>		

Sample I.D. Letter		Site Descript	ion		
Sample A	` `	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
A		nates in UTM Zone 15 NAD 83 Only):  V Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample		Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Suppose	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	LDPR Code: FEPA8	Job Code: NJ10 TSFF		
C		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	Annual September 1999 Annual Property of the Conference of the Con
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) n number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
D		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
REMARKS: HWP: Michael St	rah				



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B-5

Collector's Name	ا ا	en-	Ham	<u></u>		· · · · · · · · · · · · · · · · · · ·		Chi	Descripti	on of Shipment		
(Please Print) <b>Affiliation:</b>	ESP		HANN NERO		SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and in	itialed			
Allination: (circle one)	DGLS	HWP	Other:	SERO	SLKO	3 W NO	WIT	x Hand Delivered	intiaicu	No. Of	Containe	rs: 4
Sample Number	Sample			Anal	vene.			Sample		For Lab Use	<u>Only</u>	
Sample Number	Collected			Anar	yses 		-	Туре	Matrix	Container		Preserved
	Date:	Hexavalent C	hromium						Water	1L amber	120 mL	$H_2SO_4$
1000370	1,26.10	Percent Mois	ture					Grab	Soil	Cubitainer	,	$-\frac{HNO_3}{NAOM}$
(Sample A)	1.00							x Composite  Modified	Organic Sludge	<del></del>	lgene 1L	— <sub>HCL</sub>
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp	Other:	Other:	Other:		500mL	11CL 4° C(None)
Tor Lab Ose Only	_	D.0	11011	PII	opee. cond.	Tomp.		outer.			250mL	Disinfected
AB14420	14:44								-100	1-0ther:21		Other
	Date:	Hexavalent C	hromium			<del></del>			Water	IL amber	120 mL	H₂SO↓
1000371	1.2610	Percent Mois	ture					Grab	<b>√</b> Soil	C <b>ubita</b> iner		HNO 3
•	1,70							x Composite	Organic		l <b>ge</b> ne	NAOH
(Sample B)			<u> </u>	T			T	Modified	Sludge	<del>_</del>	$\frac{IL}{200}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:		500mL	14° C(None)
AB14421	14:15									Encore Other:	250mL	Disinfec <b>ted</b> Other
11019721	Date:	Hexavalent C	````	<u> </u>				1	Water		120 mL	H <sub>2</sub> SO <sub>4</sub>
								Grab	Soil		120 mL	$-\frac{117507}{HNO_3}$
1000372	1.26.10	CICCIII IVIOIS	_		~	- ^	,	<b>—</b>	Organic		lgene	NAOH
(Sample C)	1		HO	LD FO	or La	ter H	NHYLYSIS	Modified	Sludge	8 oz glass	ÎL	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:		500mL	1 4° C(None)
	14:15										250mL [	Disinfected
AB14422	11.17	<u> </u>		<u> </u>						Other:		Other
	Date:	Hexavalent C							Water		120 mL	$H_2SO_4$
1000373	1.27.10	Percent Mois	ture					Grab .	Soil	Cubitainer	. }	HNO;
	1.41							x Composite Modified	Orga <b>ni</b> c Sludge	2 oz glass Nai j 8 oz glass	lgene 1L	— NAOH HCL
(Sample D) For Lab Use Only	Time;	D.O	Flow	рН	Spec. Cond.	Temp	Other:	Other:	Other:	<u> </u>	500mL	1 4° C(None)
		D.0	1 10 W	pii	Spec. Cond.	remp.	Other.	Other.	Oiner.		250mL	Disinfected
AB14423	115:30									Other:		Other
Relinquished By:	, ,	11			Received By	V21			Date:		Time:	A. I
	next	Han	mm		1 kila		Emple	<u>~</u>	2-11	-10		CH
Relinquished By:					Received By		1		Date:		Time:	
Relinquished By:					Received By	:			Date:		Time:	
									<u> </u>			

Sample I.D. Letter		Site Descript	ion		
	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, static	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
A	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	August Planning
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В	X Easting :	nates in UTM Zone 15 NAD 83 Only):  Y Northing  Site/Study Name:	Accuracy (check one) EPE (meters) PDOP County:	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	LDPR Code: FEPA8	Job Code: NJ10 TSFF		
	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID: 202	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID: 263	
REMARKS: HWP: Michael St	croh				



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Collector's Name	Ke	``	Hann	~~~				Description of Shipment				
(Please Print) Affiliation:		KCRO		SERO	SLRO	CWBO	WDD	Shipped-Carrier: Tape sealed and in	itiolad			
(circle one)	ESP		Other:	SERU	SLKO	SWRO	WPP	x Hand Delivered	iniaied	No.	Of Containe	ers: <b>4</b>
	Sample	1	<del>-</del>			<del></del>		Sample	· · · · · ·	For Lab U		
Sample Number	Collected			Anal	yses 			Type	Matrix	Contair	ner	Preserved
	Date:	Hexavalent (	Chromium						Water	1L amber	120 mL	$H_2SO_4$
1000374	1-27-10	Percent Mois	sture					Grab	<b>▼</b> Soil	Cubitainer		HNO 3
,	(" " " " " " " " " " " " " " " " " " "							x Composite	Organic	_	Nalgene	NAOH
(Sample A)	<u> </u>		In.				Ta.	Modified	Sludge	1 8 oz glass	$-\frac{lL}{r}$	— HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	<u> </u>	500mL	1 4° C(None)
AB14424	1530									Encore Other:	250mL	Disinfected Other
11019787	Date:	Hexavalent (	Thuraminum				<u> </u>		Water	1L amber	120 mL	$H_2SO_4$
10000	Date.	Percent Mois						Grab	✓ Soil	— TL amver Cubitainer	— 120 mL	$-\frac{H_2SO_4}{HNO_3}$
1000375	1-27-10	l ciccin wiois				- Λ.,	. : .	x Composite	Organic		N <b>al</b> gen <b>e</b>	NAOH
(Sample B)	' ' ' ' '		4400	D FOR	2 LASTE	JR HWF	trys,s	Modified	Sludge	8 oz glass	IL IL	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	— <sub>500mL</sub>	$\frac{1}{4}$ 4° C(None)
	1572			•	-	•	:	_		Encore		Disinfected
AB14425	1530									Other:		Other
2	Date:	Hexavalent (							Water	1L amber	120 <b>m</b> L	$H_2\overline{SO}_4$
1000376	1-27-10	Percent Mois	sture					Grab	<b>√</b> Soil	Cubitainer		HNO 3
, <u> </u>	1-27-10							x Composite	Organic		Nalgene	NAOH
(Sample C)	=-:		1					Modified	Sludge	1 8 oz glass	$-\frac{IL}{I}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	14°C(None)
AB14426	1256								ļ	Encore	250mL	Disinfected Other
71019726	Date:	Hexavalent (	71						Water	Other: 1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
1000000		Percent Mois						Grab	√ Soil		—120 mL	$-\frac{H_2SO_4}{HNO_3}$
1000377	1-27-10	I CICCIN IVIOIS	sture					x Composite	Organic Organic		Nalgene	-NAOH
(Sample D)	(							Modified	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	— 500mL	4° C(None)
	1350				•	•				Encore	250 <b>m</b> L	Disinfected
AB14427										Other:		Other
Relinquished By:		11			Received By		41	<b>A</b> .—	Date:		Time:	
16.	nneth	Han	mon		9 /au	da	11000	JOSEP _	2-1	1-10		1104
Relinquished By:					Received By	:	•	Ü	Date:		Time:	
Relinquished By:					Received By	:			Date:		Time:	
				·								

Sample I.D. Letter		Site Descript	ion			
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  SUIS	County: (Multip on number, sample	ole)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
A	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):		(check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Multip on number, sample	ole)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В	ری GPS Coordinates (Record Coordin X Easting	ates in UTM Zone 15 NAD 83 Only): Y Northing		(check one) EPE (meters) PDOP	Sample Reference ID:	
Sample		Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Size Size Size Size Size Size Size Size	County: (Multipon number, sample	ole)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
		nates in UTM Zone 15 NAD 83 Only):  Y Northing		(check one) EPE (meters) PDOP	Sample Reference ID:	204
Sample	_	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Superior Station	County: (Multip on number, sample		LDPR Code: FEPA8	Job Code: NJ10 TSFF
D	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing		(check one) EPE (meters) PDOP	Sample Reference ID:	
REMARKS: HWP: Michael S	troh					



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B.5

Collector's Name:								Description of Shipment				
(Please Print)			R N N O					Shipped-Carrier:				
Affiliation: (circle one)	ESP DGLS	KCRO HWP	NERO Other	SERO	SLRO	SWRO	WPP	Tape sealed and i	nitialed	No	o. Of Contain	ers: 4
(circle one)		11 44.1	Other	•	=			<del></del>		For Lab U		crs.
Sample Number	Sample Collected			Ana	lyses			Sample Type	Matrix	Contai		Preserved
	Date:	Hexavalent C	`haomium		<del></del>			-740	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	Date.	Percent Mois						Cook	Soil	Cubitainer	— 120 mL	$-\frac{112504}{HNO_3}$
110003781	1-27-10	reicent Mois				٨	•	Grab x Composite	V Soll Organic	2 oz glass	Nalgene	NAOH
(Sample A)	1 21 10		Hor	n Fo	R LAM	EN th	ALYSIS	Modified	Sludge	8 oz glass	Naigene 1L	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.		Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
•		D.O	110 "	PII	Spec. Cona.	remp.	Outer.	- Ouler.	Other.	Encore	$-\frac{300mL}{250mL}$	Disinfected
AB14428	1256								l .	Other:		Other
	Date:	Hexavalent C	hromium						Water	1L amber	120 mL	$H_2SO_4$
1006276		Percent Mois	sture					Grab	Soil	Cubitainer		HNO 3
(006379	1-26-10							x Composite	 Organic	2 oz glass	Nalgene	NAOH
(Sample B)								Modified	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
20011120	1120				ì					Encore	250mL	Disinfected
AB14429			<u> </u>				<u>l</u>			Other:		Other
	Date:	Hexavalent (			1				Water	IL amber	120 mL	$H_2SO_4$
1006380	i	Percent Mois	sture					Grab	√Soil	Cubitainer		HNO 3
	1-26-10							x Composite	Organic	2 oz glass	Nalgene	NAOH
(Sample C)								Modified	Sludge	8 oz glass	$-^{1L}$	HCL
For Lab Use Only		D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
AB14430	1100				ļ					Encore	250mL	Disinfected
				<u> </u>			<u> </u>			Other:	100	Other
(())	Date:	Hexavalent C							Water	1L amber	120 mL	$H_2SO_4$
(00038)		Percent Mois	ture					Grab	Soil	Cubitainer	N	HNO 3
(Sample D)	1-26-10							X Composite Modified	Organic Sludge	2 oz glass 1 8 oz glass	Nalgene 1L	NAOH HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temn	Other:	Other:	Other:	VOA vial	$-\frac{12}{500mL}$	11CL 4° C(None)
		<b>D</b> .0	110"	P	Spec. Cond.	Temp.	Cuner.	- outer.	- omer.	Encore	250mL	Disinfected
AB1443 (	1100					$\cap$				Other:		Other
Relinguished By:					Received By	x ( ) ( )	1		Date:	i ,	Time:	:
160	neth	Han	NA		1 /au	11 5	Nome	1000 I	2-	11-10		1104
Relinquished By:			· · · · · · · · · · · · · · · · · · ·		Received By	:	1		Date:		Time:	<del></del>
Relinquished By:					Received By				Date:		Time:	

Sample I.D. Letter		Site Descript	ion			
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields		ltiple)	FEPA8	NJ10
Sample	· · · · · ·	where and how the sample was collected, statio	on number, samp	le type, etc.):		TSFF
A		JUIS	per construit and a second and a			
1.		ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	2
	A Lasting A Parting A	F Figeting		EPE (meters)	7)04	
	Facility ID:	Site/Study Name:	County:	PDOP	LDPR Code:	Job Code:
	racinty ID:	Tannery Sludge Farm Fields	, -	ltiple)		1 1
	Sample Comment (briefly describe	where and how the sample was collected, statio			FEPA8	NJ10
Sample	71	らい工ら	namber, samp	p.,		TSFF
<b>B</b>	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	205	
				PDOP	200	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields		ltiple)	FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, statio	on number, samp	ole type, etc.):		TSFF
		4 SUIS				
C	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	J
	X Easting	Y. Northing		EPE (meters)	705	
				PDOP	203	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields		ltiple)	FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, station	on number, samp	ole type, etc.):		TSFF
		)CLIS				
D	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	<u> </u>
		Y Northing		EPE (meters)	205	
				PDOP	200	
REMARKS:						
HWP: Michael S	troh					



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Collector's Name								Description of Shipment				
(Please Print)		<del></del>	teinno					Shipped-Carrier:	22.1.1			
·	ESP DGLS	KCRO HWP	NERO Other:	SERO	SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	nitialea	No.	Of Containe	ers: 4
(circle one)		LI WI	Other.		-			<u> </u>		For Lab Us		515.
Sample Number	Sample Collected			Anal	yses			Sample Type	Matrix	Containe		Preserved
	Date:	Hexavalent C	hromium					1 -76-	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	Daic.	Percent Mois						Grab	V Soil	Cubitainer	- 'ZO'''L	$-\frac{112001}{HNO_3}$
1000382	1-25-10	r creent iviois	, ture					x Composite	Organic		algene	NAOH
(Sample A)	1 -5							Modified	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	$ _{500mL}$	$\frac{1}{1}$ 4° C(None)
,	1400			F		<del></del> -				Encore	-250mL	Disinfected
AB14432	1400									Other:	_ `	Other
	Date:	Hexavalent C	Chromium		-				Water	1L amber	120 mL	$H_2SO_4$
1000		Percent Mois	sture					Grab	<b>✓</b> Soil	Cubitainer	_	— <sub>HNO ₃</sub>
1000383	1-25-10							x Composite	Organic	2 oz glass N	lalgene	NAOH
(Sample B)								Modified	Sludge	8 oz glass	1 <i>L</i>	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
AD 111172	1405									Encore	250mL	Disinfected
AB 14433	. ,									Other:		Other
	Date:	Hexavalent (							Water	IL amber _	120 mL	$H_2SO_4$
1000384	1-25-10	Percent Mois				^		Grab	<b>V</b> Soil	Cubitainer		HNO 3
_	(° L3 /0		Hou	DFOR	1 AT DO	AAIA	ی رځنۍ	x Composite	Organic		lalgene	NAOH
(Sample C)	era!	D 6						Modified	Sludge	\ 8 oz glass	$-\frac{lL}{c}$	HCL
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial _	_500mL	$\int 4^{\circ} C(None)$
AB14434	1400						ŀ			Encore _	250mL	Disinfected Other
1011	D-4		<u> </u>	<u> </u>	<u></u>			<u> </u>	11/	Other:	120 1	
	Date:	Hexavalent (						Cook	Water √ Soil	IL amber Cubitainer	120 mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub>
100385	1-7/05	Percent Mois	sture					Grab	Organic		I almous	— NAOH
(Sample D)	1-2670							x Composite Modified	Sludge	2 oz glass N N 8 oz glass	Valgene 1L	— <sub>НСL</sub>
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temn	Other:	Other:	Other:	VOA vial	$-\frac{12}{500mL}$	$\frac{1}{1}$ 4° C(None)
Ť		D.O	110 **	pri	Spec. Cond.	i cirip.	Jonier.	- other.	Other.	Encore -	250mL	Disinfected
AB14435	1530									Other:		Other
Relinguished By:		<del>!</del>			Regeived By	(7)	^		Date:		Time:	
16.	noth	Hom	مرتب	Ċ			( hom	2000	2-11	-10		1104
Relinquished By:		4 4		*	Received By		· -	1	Date:		Time:	
					Darris I.D.				5		Т:	
Relinquished By:					Received By				Date:		Time:	
L									<u> </u>			

Sample I.D. Letter		Site Descript	ion		
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station  Supplies:  Tannery Sludge Farm Fields  Tannery Sludge Farm Fields	County:  (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
A		nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	(Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В	X Easting	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Tannery Sludge Farm Fields	(Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample D	· · ·	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, static	County:  (Multiple) on number, sample type, etc.):	LDPR Code: -FEPA8	Job Code: NJ10 TSFF
REMARKS:		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	



Page 1 of 2  $\Re -5$ 

#### LABORATORY ORDER ID:\_\_\_\_\_

Collector's Name	<del></del>	V	en	1-1000	NON				Descripti	on of Shipment		
(Please Print)  Affiliation:	- (70)	KCDO.	NERO	SERO		CWDO	WDD	Shipped-Carrier: Tape sealed and in	itiolad	<u> </u>		
(circle one)	DGLS	KCRO HWP	Other:		SLKO	SWRO	WPP	x Hand Delivered	iidaicu	No	. Of Contain	ers: 4
(circle one)		11111	Other:					<del></del>	<u> </u>	For Lab U		CIS.
Sample Number	Sample Collected			Anal	yses			Sample Type	Matrix	Contain		Preserved
	Date:	Hexavalent (	Chromium						Water	1L amber	120 mL	$H_2SO_4$
1000201		Percent Mois	sture					Grab	<b>√</b> Soil	Cubitainer		$-$ HNO $_3$
1000336	1-2670							x Composite	Organic	2 oz glass	Nalgene	NAOH
(Sample A)								Modified	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
1011/1/2/	1600			1						Encore	250mL	Disinfected
AB144.36	1000									Other:		Other
	Date:	Hexavalent C	Chromium						Water	1L amber	120 mL	$H_2SO_4$
1000207		Percent Mois	sture			,		Grab	Soil	Cubitainer		HNO 3
1000387	1-76-10	1	Los I rat	FOR L	ATIM	Jam		x Composite	Organic		Na <b>l</b> gen <b>e</b>	NAOH
(Sample B)			10017	TUR			<u>-4212</u>	Modified	Sludge	<u> </u>	1L	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial .	500mL	1 4° C(None)
A/W/127	1530									Encore	250mL	Disinfected
AS14437	1750									Other:		Other
	Date:	Hexavalent C							Water	1L amber .	120 mL	$H_2SO_4$
1000388		Percent Mois	ture					Grab	<u>;</u> ∕Soil	Cubitainer		HNO 3
-	1-27-10							x Composite	Organic		Nalgene	NAOH
(Sample C)				-				Modified	Sludge	1 8 oz glass	$-^{1L}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
DC1111128	0948						1			Encore	250mL	Disinfected
AB14438									-	Other:		Other
	Date:	Hexavalent C							Water	lL amber	120 mL	$H_2SO_4$
0003559	1 27-0	Percent Mois	sture					Grab	✓ Soil	Cubitainer		HNO 3
	1-27-10							x Composite	Organic		Nalgene	NAOH
(Sample D)								Modified	Sludge	8 oz glass	$-^{IL}$	· HCL
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
AS14439	1030									Encore Other:	250mL	Disinfected Other
Relinguished By: 1	,	4.4			Received By:	. ( (	) 1		Date:		Time:	
//	emnt	lL Ho	ma	$\sim$	LI b	$(\lambda)_{a} \times$	TIME	10 do		-10		104
Relinquished By:	<u>~/ V. F. V.</u>				Received By:	· · · · · · · · · · · · · · · · · · ·	TIMEA V		Date:		Time:	· - /
						•		•				
Relinquished By:					Received By:			<u></u>	Date:		Time:	
-1												
								<del></del>				

Sample I.D. Letter		Site Descript	ion			
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Mul on number, sampl		LDPR Code: FEPA8	Job Code: NJ10 TSFF
Δ		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one) EPE (meters)	Sample Reference ID:	
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Mul		LDPR Code: FEPA8	Job Code: NJ10 TSFF
В	GPS Coordinates (Record Coordin	(check one)  EPE (meters)  PDOP	Sample Reference ID:			
Sample		Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Mul on number, sampl		LDPR Code: FEPA8	Job Code: NJ10 TSFF
C	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Mul on number, sampl	tiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
in i		nates in UTM Zone 15 NAD 83 Only):  ***********************************	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:	
REMARKS: HWP: Michael St	troh					

#### Page 1 of 2

## MISSOURI DEPARTMENT OF NATURAL RESOURCES FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

Collector's Name									Description of Shipment Shipped-Carrier:			
(Please Print) Affiliation:	ESP	KCRO	NERO	SERO	SLRO	SWRO	WPP	Tape sealed and in	nitialed			1/
(circle one)	DGLS	HWP	Other			o w Ro		x Hand Delivered		No	. Of Contain	ers: T
C	Sample							Sample		For Lab U	se Only	
Sample Number	Collected			Anal	yses ———			Type	Matrix	Contai	ner	Preserved
	Date:	Hexavalent (	Chromium						Water	1L amber	120 mL	$H_2SO_4$
1000200	- 48	Percent Mois	sture				,KH	Grab	<b>√</b> Soil	Cubitainer		HNO 3
1000030	1-27-10		عنطيه	500	1 1	A 10	حادثاد	x Composite	Organic		Nalgene	NAOH
(Sample A)			+	7 1010		- 2100M	<u> </u>	Modified	Sludge	8 oz glass	$-^{IL}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	<u>j</u> 4° C(None)
Drull IID	0902									Encore	250mL	Disinfected
AS144 40			<u> </u>	<u>L</u>			<u> </u>			Other:		Other
	Date:	Hexavalent C		•					Water	1L amber	120 mL	$H_2SO_4$
1000201	\	Percent Mois	sture					Grab	<b>√</b> Soil	Cubitainer		HNO 3
1000	1-26-10							x Composite	Organic	_	Nalgene	NAOH
(Sample B)			T	<del>,</del>	,		<del></del>	Modified	Sludge	8 oz glass	$-\frac{lL}{l}$	HCL .
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	i 4° C(None)
AB14440	1600									Encore Contract	250mL	Disinfected
11017774				<u> </u>			<u> </u>			Other:		Other
	Date:	Hexavalent (							Water	1L amber	120 mL	$H_2SO_4$
1000392		Percent Mois	sture					Grab .	Soil	Cubitainer		HNO <sub>3</sub>
	1-26-10							x Composite	Organic		Nalgene	NAOH
(Sample C)		D. C.	I	1		I.T.	Tot	Modified	Sludge	8 oz glass	$-\frac{IL}{500}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	<i>Oth</i> er:	VOA vial	500mL	1 4° C(None)
AS14442	1626			İ						Encore Other:	250mL	Disinfected Other
1131771a	Data		<u> </u>	<u> </u>			<u> </u>	<u> </u>	Water		120 I	$H_2SO_4$
3	Date:	Hexavalent C						Cont	Water    Soil	IL amber	120 mL	$-\frac{H_2SO_4}{HNO_3}$
10003921	(-2670	Percent Mois	sture					Grab	√ Soll Organic	Cubitainer 2 oz glass	Malana	NAOH
(Sample D)	(-26 1-							x Composite  Modified	Sludge	1 8 oz glass	Nalgene IL	— HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	$-\frac{1L}{500mL}$	$\frac{HCL}{1} 4^{\circ} C(None)$
	1600									Encore	250mL	Disinfected
AS14443	100		<u> </u>				<u> </u>			Other:		Other
Relinquished By:	meth	- Na	nner		Received By	La S	Morris	Mor	Date:	-10	Time:	1104
Relinquished By:					Received By				Date:		Time:	
Relinquished By:					Received By				Date:		Time:	

Sample I.D. Letter		Site Descript	ion		
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
A		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	`	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only):  V Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
C		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	LDPR Code: FEPA8	Job Code: NJ10 TSFF		
	GPS Coordinates (Record Coordin	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:		
REMARKS:	<del>t</del> wal				



Page 1 of 2

B 5

Collector's Name	:	Ker	, <u> </u>	Janna	227			Shipped-Carrier:	Description of Shipment			
(Please Print) Affiliation:	(ESP)		NERO	SERO		SWRO	WPP	Tape sealed and in	nitialed			1 .
(circle one)	DGLS	KCRO HWP	Other		3LKO	SWKO	WPF	x Hand Delivered	maicu	No.	Of Containe	ers: 4
Carrala Namel	Sample			A			-	Sample		For Lab Us	se Only	•
Sample Number	Collected		····	Anai	iyses —————			Type	Matrix	Contain	er	Preserved
	Date:	Hexavalent C							Water	1L amber	120 mL	$H_2SO_4$
1000394		Percent Mois	sture					Grab	<b>√</b> Soil	Cubitainer		HNO 3
·	1-27-10							x Composite	Organic		Nalgene	NAOH
(Sample A)						· · · · · · · · · · · · · · · · · · ·		Modified	Sludge	1 8 oz glass	$-^{1L}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	_i_4° C(None)
AB14444	1118									Encore	250mL	Disinfected
11519777	• •		<u> </u>							Other:		Other
	Date:	Hexavalent C							Water	1L amber	120 mL	$H_2SO_4$
1000395	1-27-10	Percent Mois	sture					Grab .	<b>√</b> Soil	Cubitainer		HNO 3
<u>'</u>	1-2110							x Composite	Organic		Nalgene	NAOH
(Sample B)		5.0	In.	Т	10 0 1		Tot	Modified	Sludge	8 oz glass	$-\frac{lL}{200}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	$-\frac{500mL}{250}$	4° C(None)
AB14445	1210				:					Encore Other:	$-^{250mL}$	Disinfected
11011173			<u> </u>		<u>!</u>		<u> </u>		117 .		120 r	Other
100000	Date:	Hexavalent (						Oh	Water	1L amber	120 mL	$-\frac{H_2SO_4}{HNO}$
1000396	1-27-10	Percent Mois	sture					Grab	∕Soil	Cubitainer		HNO <sub>3</sub>
(Sample C)	1 21							x Composite  Modified	Organic Sludge		Nalgene 1L	NAOH
(Sample C)	Time:	D.O	Elam	1	Icas Card	т	loui		Sludge	1 8 oz glass		HCL
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	1emp.	Other:	Other:	Other:	VOA vial	$-\frac{500mL}{250mL}$	1 4° C(None)
AB14446	1118				]					Encore Other:	250mL	Disinfected Other
VIII 170	Date:	Hexavalent (	The consistence			<u> </u>			Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
		Dargent Maie						Grab	Soil	Cubitainer -	— 120 <i>m</i> L	$-\frac{112304}{HNO_3}$
1000397	1-27,0	refeeld Mos	Sture					x Composite	Organic	<del></del>	Nalgene	— <sub>NAOH</sub>
(Sample D)	, CHO	1						Modified	Sludge	8 oz glass	1L	-NAOH HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temn	Other:	Other:	Other:	VOA vial	$-\frac{12}{500mL}$	$\frac{1}{1}$ $4^{\circ}$ C(None)
·		D.0	li iow	Pii	Spec. Cond.	Temp.	Jounes.	— other.	- Olmer:	Encore	$-\frac{300mL}{250mL}$	Disinfected
AB14447	1110									Other:		Other
Relinquished By:	1	<u> </u>			Received By	: ( )	1	<del></del>	Date:		Time:	
Kin	reth	Han	m		11/0		Ton	Messer	2-1	1-10	1	110
Relinquished By:		1 100			Received By	:			Date:		Time:	
					<b> </b>							
Relinquished By:					Received By	:			Date:		Time:	
	<u></u>											

Sample I.D. Letter		Site Descript	ion		
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
A		ates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	(Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
В	A Pasting A Section 1997	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample C	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	(Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	Section and the section of the secti
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
D REMARKS:	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	



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#### LABORATORY ORDER ID:\_\_\_\_\_

Collector's Name	17	A	11.					Description of Shipment				
(Please Print)	~ K	en		V 2U				Shipped-Carrier:				
		KCRO	NERO	SERO	SLRO	SWRO	WPP	Tape sealed and in	itialed			ct
(c <b>ircle</b> one)	DGLS	HWP	Other:	<u></u>			-	x Hand Delivered			of Containe	ers: 7
Sample Number	Sample			Anal	VSAS			Sample		For Lab Use	Only	
Sample Number	Collected			Allai	yses			Type	Matrix	Containe	<u>r</u>	Preserved
	Date:	Hexavalent C	hromium						Water	1L amber	_120 mL	$H_2SO_4$
INFAZOD	1-27-10	Percent Mois	ture					Grab	✓ Soil	Cubitainer		HNO 3
1000318	1-2110							x Composite	Organic	2 oz gl <b>ass</b> No	a <b>lgen</b> e	NAOH
(Sample A)					-			Modified	Sludge	1 8 oz glass	$L^{IL}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	_500mL	<u> </u>
100000	1046									Encore	_250mL	Disi <b>nfe</b> cted
AB14448	,									Other:		Other
	Date:	Hexavalent C							Water	IL amber	_120 mL	H <sub>2</sub> SO <sub>4</sub>
1080399		Percent Mois	ture					Grab	<b>√</b> Soil	Cubita <b>iner</b>		HNO 3
, ,	1-27-10							x Composite	Organic		algene	NAOH
(Sample B)			····	<del></del>	<del> </del>			Modified	Sludge	1 8 oz glass	$-\frac{lL}{l}$	HCL
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	_500mL	1 4° C(None)
AB14449	1046						1			Encore _	_ <sup>250mL</sup>	Disinfected
1161777										Other:		Other
	Date:	Hexavalent C							Water	1L amber	_120 mL	$H_2SO_4$
1000460	1-26-10	Percent Mois	ture					Grab	_∕Soil	Cubitainer		HNO 3
I.	1-46-10							x Composite	Organic		a <b>lgen</b> e	NAOH
(Sample C)			T:					Modified	Sludge	8 oz glass	_ <i>IL</i>	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
A614450	1540								,	Encore	_ <sup>250mL</sup>	Disinfected
11017700			<u> </u>		<u> </u>		1			Other:		Other
	Date:	Hexavalent C							Water	1L amber	_120 mL	$-\frac{H_2SO_4}{H_2SO_4}$
1000461		Percent Mois	sture					Grab	Soil	Cubitainer		HNO 3
	1-26-10							x Composite	Organic		algene	NAOH
(Sample D)	T:	D 0		T	lo o i	<b>—</b>	Tou	Modified	Sludge	8 oz glass	$-\frac{IL}{500}$	HCL Tuberous
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	_500mL	4° C(None)
AB14451	1603									Encore Other:	_ <sup>250mL</sup>	Disinfected Other
Relinquished By:		. 1.	<u> </u>	L	Received By	(())		1	Date:		Time:	
Lemquished by.)	mil	2 Ha	m		11/11	by Th	PN DX	ĴΥ۱	$\mathcal{Q}$	1-10		1110
Relinquished By:					Received By	:		•	Date:		Time:	, ,
							<b>,</b>					
Relinquished By:					Received By	:			Date:		Time:	
	<del> </del>											

Sample I.D. Letter		Site Descript	ion			
	Facility ID:		County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multi	<u> </u>	FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, statio	n number, sample	type, etc.):		TSFF
A		110 SUIS	<b>III.</b>	and the same and the		
**		ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
		TENORTHE SECTION		EPE (meters) PDOP	215	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
	gerick filology general folgogy Nelsonskinskinsk grave i solgensk filology general solgensk grave i solgensk filology general solgensk filology gene	Tannery Sludge Farm Fields	(Multi		FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, statio	n number, sample	type, etc.):		TSFF
_		し い 士 S				
В	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X Easting ///	Y-Korting		EPE (meters)	215	ļ
				PDOP	N D	<del>,</del>
	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multi	mlo)	LDPR Code:	Job Code:
~	Sample Comment (briefly describe	where and how the sample was collected, statio		<u> </u>	FEPA8	NJ10
Sample		32 SUIS		oj po, com		TSFF
C		ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	Egy de de marcon, como esta esta esta esta esta esta esta esta
	X Easting	Y Northing		EPE (meters)	$2V_{\alpha}$	
	Facility ID:	Site/Study Name:	Countrie	PDOP	LDPR Code:	Job Code:
 	racinty ID:	Tannery Sludge Farm Fields	County: (Multi	nle)		1 1
	Sample Comment (briefly describe	where and how the sample was collected, statio			FEPA8	NJ10
Sample		6 SUIS	,   •	,		TSFF
D	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	216	
DEMARKS.				PDOP	07.10	
REMARKS: HWP: Michael St	rah					
ii vvi : iviichaci Si	. On					



#### MISSOURI DEPARTMENT OF NATURAL RESOURCES

Page 1 of 2 3 5

#### FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

Collector's Name:	Collector's Name: Len Levinon								Description of Shipment				
(Please Print)			ANNO		OL DO	CIUDO	WADD	Shipped-Carrier:	.***.11				
Affiliation: (circle one)	ESP) DGLS	KCRO HWP	NERO Other:	SERO	SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	nitiaiea	No	Of Containe	4	
(circle one)	Sample	11117	Other:				· · · · · · · · · · · · · · · · · · ·			For Lab Us		.13.	
Sample Number	Collected			Anal	yses			Sample Type	Matrix	Contain		Preserved	
	Date:	Hexavalent C	hromium		<del></del>		<del></del> :	-56-	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
10001100		Percent Mais						Grab	Soil	Cubitainer _	-120 mL	$-\frac{112807}{HNO_3}$	
11/700402	1-26-10	i crecini ivion			•	~ A		x Composite	Organic		lalgene	NAOH	
(Sample A)	•		4401	D FO	KFA	LEASIAN	ALUSIS	Modified	— Sludge	8 oz glass	lL	${HCL}^{MOII}$	
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.		Other:	Other:	Other:	VOA vial	- 500mL	4° C(None)	
ر م	1540		]	[	l	•				Encore		Disinfected	
AB14452	\ <b>7</b>						-			Other:	_	Other	
	Date:	Hexavalent C	Chromium						Water	1 <b>L am</b> ber	120 <b>m</b> L	$H_2SO_4$	
immino		Percent Mois	sture					Grab	√Soil	Cubitainer	_	HNO 3	
(UU)	1-26-10							x Composite	Organic	2 oz glass N	lalgene	NAOH	
(Sample B)								Modified	Sludge	8 oz glass	1 <i>L</i>	HCL	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	<u>1</u> 4° C(None)	
DOULLE 3	1321									Encore	250mL	Disinfected	
AB14453			<u> </u>	<u> </u>	<u> </u>		<u> </u>			Other:		Other	
	Date:	Hexavalent C							Water	1L amber	120 mL	$H_2SO_4$	
1000464		Percent Mois	sture					Grab	Soil	Cubitainer		HNO <sub>3</sub>	
-	1-26-10							x Composite	Organic		Valgene	NAOH	
(Sample C)	œ'	D 0	Tr.		la a .	lm.	lou	Modified	Sludge	1 8 oz glass	$-\frac{IL}{200}$	HCL	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	1 emp.	Other:	Other:	Other:	VOA vial	$-\frac{500mL}{250}$	14° C(None)	
AB14454	1147								:	Encore Other:	250mL	Disinfected Other	
	Date:	Hexavalent (	The completions	<u> </u>	<u> </u>	<u> </u>	1		Water	1L amber	120 mL	$H_2SO_4$	
Manaile	Date.	Percent Mois						Grab		Cubitainer _	-120 mL	$-\frac{112504}{HNO_3}$	
1000405	1-26-10	P CICCIL IVIOIS	stare					x Composite	Organic Organic		Valgene	NAOH	
(Sample D)	,							Modified	Sludge	8 oz glass	1L	HCL	
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	$-\frac{12}{500mL}$	4° C(None)	
	1245			1						Encore		Disinfected	
AB14455								1		Other:		Other	
Relinquished By:		1/1:			Received By	: (c.e	-1		Date:		Time:		
L	mell	Z HI	mns	$\sim$	111/10	de S	-110 L	· BUCH		11-10		1110	
Relinquished By:					Received By	:	113-7-1	1	Date:		Time:	**	
Relinquished By:					Received By	;			Date:		Time:		

Sample I.D. Letter		Site Descript	ion		
Sample A	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
A.		ates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters PDOP	Sample Reference ID:	
Sample	` ` ` <u> </u>	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: _FEPA8	Job Code: NJ10 TSFF
B 	GPS Coordinates (Record Coordin  X Easting	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	(Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
D REMARKS:	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one)  EPE (meters PDOP	Sample Reference ID:	



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LABORATORY ORDER	$\mathbf{L}_{A}$	<b>AB</b>	OR	A.	LOI	₹Y	OR	DER	ID
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Collector's Name	: 1/	<u> </u>	1 0. 4	210000			······		Description of Shipment			
(Please Print)	- Art	5 A		MON				Shipped-Carrier:	<del></del>			
	ESP DGLS	KCRO HWP	NERO Other:	SERO	SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	iitialed	<b>3</b> .1	000	니
(circ <b>le</b> one)		HWP	Other:				···	<u> </u>			Of Containe	rs:
Sample Number	Sample			Anal	yses			Sample		For Lab Us		
	Collected				<u> </u>			Туре	Matrix	Contain		Preserved
	Date:	Hexavalent C							Water	1L amber	120 mL	$H_2SO_4$
1)0004de		Percent Mois	sture					Grab	∢ Soil	Cubitainer	]	HNO 3
	1-26-10							x Composite	Organic		Valgene	NAOH
(Sample A)			,	<del></del>	<del>,</del>			Modified	Sludge	1 8 oz glass	$-^{IL}$	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
101111	1055									Encore	$-^{250mL}$	Disinfected
AR14456				<u></u>			<u> </u>			Other:		Other
	Date:	Hexavalent C							Water	IL amber _	120 mL	$H_2SO_4$
1000407		Percent Mois	sture					Grab	v Soil	Cubitainer	_	HNO 3
'	1-26-10							x Composite	Organic Organic	_	Valgene	NAOH
(Sample B)		<u> </u>	<del></del>				Y	Modified	Sludge	1 8 oz glass	$-\frac{lL}{l}$	HCL .
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	1 4° C(None)
AB14457	0940									Encore	250mL	Disinfected
71/2/973 1				<u></u>	<u> </u>		<u> </u>			Other:		Other
	Date:	Hexavalent C							Water	1L amber	- 120 mL	$H_2SO_4$
11000408		Percent Mois	sture					Grab .	Soil	Cubitainer	. ,	HNO <sub>3</sub>
(5	1-26-10		7101	.n For	1 A4	700 Dal	ANGE	x Composite	Organic		Valgene	NAOH
(Sample C)	T)	D. 0						Modified	Sludge	8 oz glass	$-\frac{lL}{2}$	HCL
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	1 emp.	Other:	Other:	Other:	VOA vial _	500mL	4° C(None)
AB14458	0940									Encore -	<sup>250mL</sup>	Disinfected
701130			<u></u>	<u> </u>			<u> </u>		777	Other:	120 7	Other
	Date:	Hexavalent (							Water	IL amber	120 mL	$H_2SO_4$
1100n4n9	1-26-70	Percent Mois	sture					Grab	Soil	Cubitainer	., ,	HNO 3
(Sample D)	1 26 10							x Composite  Modified	Organic		Valgene	NAOH
(Sample D)	Time:	D.O	Flow	рН	Suna Cand	Т	Other:	<del>                                       </del>	Sludge	8 oz glass	$-\frac{lL}{500}$	HCL
For Lab Use Only		0.0	Flow	рн	Spec. Cond.	i emp.	Otner:	Other:	Other:	VOA vial	500mL	$\int 4^{\circ} C(None)$
AB144 59	1255									Encore Other:	250mL	Disinfected Other
Relinquished By:		· · · · ·	<u></u>		Received By	: 15	<u> </u>		Date:		Time:	
Kin	neth	Han	Mon	(				" Doer	J-/	1-10		1/10
Relinquished By:					Received By		· · · · · · ·		Date:		Time:	
Relinquished By:	<u> </u>				Received By	<del></del>			Date:	<u> </u>	Time:	
reiniquisiled by.					Received By	·			Date.		I mile.	

Sample I.D. Letter		Site Descripti	ion			
Sample A	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, statio	County: (Multipon number, sample t	ole)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>A</b>	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing		(check one) EPE (meters) PDOP	Sample Reference ID:	American moneyear
Sample B	Sample Comment (briefly describe	Tannery Sludge Farm Fields where and how the sample was collected, statio		ole) type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
D	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing		(check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, statio	County: (Multipon number, sample t	ole)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
C	GPS Coordinates (Record Coordin	nates in LITM Zone 15 NAD 92 Only).	1			
	<b>Example</b> X Easting	V Northing		(check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	Facility ID:	Yeloething	County: (Multip	EPE (meters) PDOP	LDPR Code: FEPA8	Job Code: NJ10 TSFF
Sample D	Facility ID: Sample Comment (briefly describe	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple) on number, sample t	EPE (meters) PDOP  lle) type, etc.):	Z/8 LDPR Code:	NJ10

MDNR Environmental Services Program



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Affiliation: ODE   CRO   NERO   SERO   SURO    Collector's Name	. [	Len J	Hann:	~	<del></del>				Description of Shipment				
Sample Number   Sample   Sam	(Please Print)  Affiliation:	(QD)	K CRO			SLRO	SWRO	W/PP		nitialed		<del></del>	
Collected   Hexavalent Chromium   Preserved   Hexavalent Chromium   Preserved   Hexavalent Chromium   Preserved   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Preserved   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Present Moisture   Preserved   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Present Moisture   Preserved   Hexavalent Chromium   Hexavale		DGLS			OBRO	SER()	SWICO	****			No. (	Of Containe	ers: 🗡
Collected   Hexavalent Chromium   Preserved   Hexavalent Chromium   Preserved   Hexavalent Chromium   Preserved   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Preserved   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Present Moisture   Preserved   Hexavalent Chromium   Hexavalent Chromium   Hexavalent Chromium   Present Moisture   Preserved   Hexavalent Chromium   Hexavale		Sample							Sample		For Lab Use	e Only	
COOUT   Composite   Composit	Sample Number				Anal	yses			•	Matrix			Preserved
Composite   Comp		Date:	Hexavalent C	Chromium							IL amber	120 mL	
Cample A)   Time:   Do   Flow   pH   Spec. Cond   Temp.   Other:	1000410	1 21 8		sture					Grab	Soil	<del></del>	1	
For Lab Use Only   Time: O900   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Hexavalent Chromium   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Date:   Hexavalent Chromium   Hexavalent Chrom		(-2670							<b>—</b> '				<del></del>
Date:   Hexavalent Chromium   Percent Moisture	manufacture and the second sec			I	<del>,</del>	T			<del></del>		<u> </u>	_	
Date:   Hexasalent Chromium   Percent Moisture   Grab   Volume	For Lab Use Only		D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:			
Date: Hexavalent Chromium Percent Moisture    Cample B    1-26-70	ARIHH LA	0900	Ì		]							$-^{250mL}$	
Percent Moisture   Percent Moi		Date:	Hayayalant (	hromium						Water		120 ml	
Composite   Comp	الماليحمي	Date.	1						Grab	_		- 120 ///	
Composite   Comp	1000411	1-76-10			<b>~</b> .	_	۸	4				:alvene	
For Lab Use Only   Time:   D.O   Flow   pH   Spec. Cond.   Temp.   Other:   Other:   Other:   Other:   Other:   Disinfected Other:   Other	(Sample B)	1 20 70	'	HOUD	tor 1	- ATE	2 HNA	ALISIS					
ABI 44 6	For Lab Use Only	Time:							Other:	Other:	<b>⊢+</b> -	500mL	4° C(None)
Date: Hexavalent Chromium Percent Moisture    Date:   Hexavalent Chromium   Percent Moisture     Hexavalent Chromium   Percent Moisture     120 mL   Hexavalent Chromium   Hexav	A 4 1 (1 ( )	(0,00									Encore	250mL	Disinfected
OOOH   Z   1-25-10   Percent Moisture	HB14461	0100						<u> </u>			Other:		
Composite   Comp	_	Date:	1									120 mL	
Modified   Sludge   8 oz glass   1L   HCL	1000417			sture									
For Lab Use Only   Time: D.O   Flow   pH   Spec. Cond.   Temp.   Other: Other: Other:   Other:   VOA vial   500mL   1°C(None   Encore   250mL   Other: Other: Other:   Other: Other:   Other:   Other: Other:   Other: Other:   Other: Other:   Other: Other:   Other: Other:   O		1-65-16	1						_				<del></del>
ABILY 62   1704   Disinfected Other:   Disinfected Other:   Disinfected Other:   O		Tr	D.O.	In.	1 ,,	10 0 1	T.	log	<del></del>		<b>⊢</b>	_	
Date:   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Hexavalent Chromium   Percent Moisture   Date:   Hexavalent Chromium   Hexavalent Chromium   Percent Moisture   Date:	_		D.O	Flow	рн	Spec. Cona.	1 emp.	Other:	Otner:	Other:		_	<del></del>
Date:   Hexavalent Chromium   Water   1L amber   120 mL   H <sub>2</sub> SO <sub>4</sub>   1NO <sub>3</sub>   1NO <sub>3</sub>   1   1   1   1   1   1   1   1   1	A S14462	1704										$-^{250mL}$	
Couposite   Cubitainer   IINO 3   National   Cubitainer   IINO 3   National   Composite   Confidence   Conf		Date:	Hexavalent (	'hromium		<u> </u>				Water		120 mI	
Sample D  1-25-10	10001117								Grab		<del></del> _	_ ' _ ' ' ' '	
(Sample D)    Modified   Sludge   8 oz glass   1L   HCI	10043	1-75-1	1						<del></del> -	<del></del>	<del></del>	algene	-
AB14463 1739  Region By:  Received By:  Received By:  Date:  Disinfected Other:  Time:	(Sample D)	(///	1							Sludge			
Relinquished By:  Received By:  Received By:  Received By:  Received By:  Other:  Other  Other  Time:  IIIC  Received By:  Date:  Time:	For Lab Usz Only	Henet	10.0	Flow	gri	Spec Cond.	Temp.	Other:	Other:	Other.	FOASIA -	500mL	1" C(None)
Relinquished By:  Received By:  Received By:  Other:  Other  Other:  Other:  Other  Time:  Time:  Time:	001111112	1730			1						Encore	250mL	Disinfected
Received By:  Received By:  Date:  Time:		<u> </u>									Other:		Other
Relinquished By: Date: Time:	Relinquished By:	tl	Han	a=40=		Required By		Thomas	14000	Date: 2-11	1-10	Time:	110
	Relinquished By:	views.	_L.YUV	// -    -	e. Francy et Australia	Received By	:	1,0,00				Time:	110
Relinquished By: Received By: Date: Time:									-				
	Relinquished By:					Received By	:		<del></del>	Date:		Time:	
		·				<u></u>				<u>L</u>		<u> </u>	

Sample I.D. Letter	Site Description												
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, stat	County: (Mult ion number, sampk		LDPR Code: FEPA8	Job Code: NJ10 TSFF							
A	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy	(check ene) EPE (meters) PDOP	Sample Reference ID:								
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, stat	County: (Multion number, sample	iple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF							
В	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one) EPE (meters) PDOP	Sample Reference ID:	THE RESERVE OF A STATE OF STAT							
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, stat	County: (Multi ion number, sample	and the second of the second o	LDPR Code: FEPA8	Job Code: NJ10 TSFF							
	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy	(check one) EPE (meters) PDOP	Sample Reference ID:								
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, stat	County: (Multi ion number, sample	iple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF							
D REMARKS:	GPS Coordinates (Record Coordin X Easting	rates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy	(check one) EPE (meters) PDOP	Sample Reference ID:	ing in an analysis of the second seco							



Page 1 of 2 B-5

Collector's Name (Please Print)	- Ve	en k	knno	$\searrow$		Description of Shipment Shipped-Carrier:						
Affiliation: (circle one)	DGLS		NERO Other:	SERO	SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	nitialed	No	. Of Containe	ers: 4
Sample Number	Sample Collected	and all the states of the stat		Anal	yses			Sample Type	Matrix	For Lab U		Preserved
1000414 (Sample A)	Date: \-25-10		Horn	FOR L				Grab x Composite Modified	Water  √ Soil  Organic  Sludge	IL amber Cubitainer 2 oz glass 8 oz glass	120 mL Nalgene 1L	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL
For Lab Use Only AB144 <b>b</b> 4	Time: 1704	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4" C(None) Disinfected Other
1000415 (Sample B)	Date: 1-25-1	Hexavalent C Percent Mois						Grab x Composite Modified	Water  ✓ Soil Organic Sludge	IL amber Cubitainer 2 oz glass 8 oz glass	120 mL Nalgene 1L	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL
For Lab Use Only AS14465	Time: 1710	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	1° C(None) Disinfected Other
000416 (Sample C)	Date:  -25-10	Hexavalent C Percent Mois						Grab x Composite Modified	Water Soil Organic Sludge	IL amber Cubitainer 2 oz glass 8 oz glass	120 mL Nalgene 1L	H 2SO 4 HNO 3 NAOH HCL
For Lab Use Only AS14466	Time: 1730	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other
1000417 (Sample D)	Date: 1-25-10	Hexavalent C Percent Mois	sture	For 1	-BAREN	Ana	27515	Grab  X Composite  Modified	Water	IL amber Cubitainer 2 oz glass 8 oz glass	120 mL Nalgene 11.	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL
AS14467	1658	() ()	F". 1.	[p1]	Sp. c. Cond	Temp.	O Juni	Other	Orken.	VOA+ wl Encore Other:	500mi 250mL	1 F (O one) Disinfected Other
Relinquished By:	met	h Ha	portz		Received By Received By	eida	The	Supple	Date: 2-11 Date:	-10	Time:	1/10
Relinquished By:					Received By:				Date: Time:			

Sample I.D. Letter													
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, stati	County:  (Multiple)  on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF								
<b>A</b>	GPS Coordinates (Record Coordin X Easting	PDO											
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, stati	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF								
<b>B</b>	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:									
Sample		Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, stati	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF								
C	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID: 222	i 1900 - Nee Saad Street								
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, stati	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF								
D REMARKS:	GPS Coordinates (Record Coordin X Easting	Sample Reference ID:	Annual Control of the										



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Collector's Name	1/0								Description of Shipment				
(Please Print)	£	en			CLDO	CWDO	WDD	Shipped-Carrier: Tape sealed and ir	itialad				
Affiliation: (circle one)	ESP DGLS	KCRO HWP	NERO Other:	SERO	SLRO	SWRO	WPP	x Hand Delivered	maieu	No. 9	Of Contain	ers: 4	
	Sample			The second of th		-,-,,-,-,-,		Sample	Constitution of the Consti	For Lab Us			
Sample Number	Collected			Anal	yses			Туре	Matrix	Containe		Preserved	
	Date:	Hexavalent C	Chromium						Water	1L amber	120 mL	$H_2SO_4$	
1000418		Percent Mois	ture					Grab	Soil	Cubitainer	_	HNO 3	
1 * :	1-27-19							x Composite	Organic		lalgene	NAOH	
(Sample A)						p		Modified	Sludge	1 8 oz glass	_ <i>1L</i>	HCL .	
For Lab Use Only		D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	_500mL	<u> </u>	
AB14468	0940						Ì			Encore _	250mL	Disinfected	
M519960							<u></u>	<u> </u>		Other:	120	Other	
	Date:	Hexavalent C							Water	/L amber	120 mL	$-\frac{H_2SO_4}{HNO_3}$	
(000419	1-27-10	Percent Mois	sture					Grab	Soil	Cubitainer		$-\frac{HNO_3}{NAOH}$	
(Sample B)	( - ( ) - ( )							x Composite  Modified	Organic Sludge	2 oz glass - N 1 8 oz glass	Salgene 11.	HCL	
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp	Other:	Other:	Other:	VOA vial	$-\frac{77}{500mL}$	1 4° C(None)	
-		D.O	110%	ļ,, ,	Spec. Cond.	(Cinp.	Other.	- Other.	Other.	Encore	$-\frac{300mL}{250mL}$	Disinfected	
AB14469	0900									Other:		Other	
	Date:	Hexavalent (	'hromium	- A - Wilder of the same of th					Water	1L amber	120 mL	$H_2SO_4$	
10001175		Percent Mois						Grab	Soil	Cubitainer		HNO 3	
1000420	(-27-10							x Composite	Organic	2 oz glass N	ialgene	NAOH	
(Sample C)								Modified	Sludge	8 oz glass	<i>IL</i>	HCL	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)	
AC1/1/72	0920									Encore	250mL	Disinfected	
AB14470			<u> </u>	<u>L</u>	<u></u>			<u> </u>		Other:		Other	
	Date:	Hexavalent (							Water	IL amber	120 mL	$H_2SO_4$	
1200421	(-27-10	Percent Mois	1 1	_			Λ	Grab	Soil	Cubitainer		$-\frac{HNO_3}{V_1 + OH}$	
(Somple D)	(0)		Horr	ferr	LAT	क्या ?	Harrioto	X Composite  Modified	Organic Sludge	2 oz glass 1 8 oz glass	Valgene 11.	NAOH HCL	
(Sample D) For Lab Use Only	Time:	0.0	Injer.	lul l	Spec. Cond.	Tamo	Other:	Other:	Othei:	FOAt vial	$-\frac{n}{500mL}$	$\int f^{\circ}C(None)$	
,	0900	. 7.0.7	in the state of th	1""	Tpec. (com)	i Cinp.	Junei.	- Our '	- Other.	Encore -	$-\frac{360mL}{250mL}$	Disinfected	
A614471	0.100					ļ			ľ	Other:		Other	
Relinguished By		<u> </u>	4	elle some er en	Rockved By			A CONTRACTOR OF THE PARTY OF TH	Date:		fing.	A CONTRACTOR OF THE CONTRACTOR	
Cenneth Kunnon					MIN	The	TIME	1 XOF (1 "W	2-11	10	1 1	114	
Relinquished By:					Received By:				Date:		Time:		
Relinquished By:					Received By:			Date: Time:					

Sample I.D. Letter		Site Descript	tion						
Sample	:	y ID:  Site/Study Name:  County:  Tannery Sludge Farm Fields  (Multiple)  e Comment (briefly describe where and how the sample was coilected, station number, sample type, etc.):							
A	SES Coordinates (Record Coordin X Easting	ates in UTA2 Zone 15 NAD 83 Ord, ): Y Northing	Assertoy (check only) EPE (meters) PDOP	Sample Referency ID:	Owner thinks of				
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, static	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF				
В	GPS Coordinates (Record Coordin X Easting	Sample Reference ID:	f						
Sample		Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, static	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF				
C	GPS Coordinates (Record Coordin X Easting	ates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	1				
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, static	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF				
<b>D</b> REMARKS:	GPS Coordinates (Record Coordin X Easting	ates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	\$				
KLIMAKKS.	, tuah			•					



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0-5

Collector's Name:		Ken	Hanr		<del></del>	<del></del>		Shipped-Carrier:	Descripti	on of Shipment		
	ESP DGLS	KCRO HWP	NERO Other	SERO	SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	nitialed	No	. Of Contain	ers: \frac{1}{4}
Sample Number	Sample Collected			Anal	yses			Sample Type	Matrix	For Lab U		Preserved
900422 (Sample A)	Date:	Hexavalent ( Percent Mois			<del> </del>			Grab x Composite Modified	Water ✓Soil Organic Sludge	1L amber Cubitainer	120 mL Nalgene 1L	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL
For Lab Use Only AS14472	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	1 4° C(None) Disinfected Other
1000423 (Sample B)	Date:							Grab  X Composite  Modified	Water ✓ Soil Organic Sludge	IL amber Cubitainer 2 oz glass } 8 oz glass	120 mL Nalgene 1L	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL
For Lab Use Only AB14473	Time: ル40	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other
000424 (Sample C)	Date: 1-26-10	Hexavalent ( Percent Mois						Grab x Composite Modified	Water √Soil Organic Sludge	IL amber Cubitainer 2 oz glass 8 oz glass	120 mL Nalgene 1L	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL
For Lab Use Only AS14474	Time: しい <sup>の</sup>	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	f 4° C(None) Disinfected Other
\006425 (Sample D)	Date: 1-26-10		sture					Grab x Composite Modified	Water ✓Soil Organic Sludge	IL amber Cubitainer 2 oz glass 8 oz glass	120 mL Nalgene 1L	H 2 SO 2 HNO 3 NAOH HCL
For Lab Use Only ASIYY 75	Time: 1050	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	1 4° C(None) Disinfected Other
Relinquished By: Relinquished By:	nni	th 14	mo		Received By Received By	5	Money	hon	Date: 2 - 1	1-10	Time:	110
Relinquished By:					Received By:				Date: Tim			

Sample I.D. Letter													
Sample		Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Suppose Station	County: (Multiple) on number, sample typ	)		Job Code: NJ10 TSFF							
A		ates in UTM Zone 15 NAD 83 Only):  Y Northing	El	heck one) PE (meters) DOP	Sample Reference ID: 223								
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Size Size Size Size Size Size Size Size	County: (Multiple) on number, sample typ	)	FEPA8	Job Code: NJ10 TSFF							
В	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing	E	heck one) PE (meters) DOP	Sample Reference ID:	ne a agusta de fai Balancescon y de la agusta de la composição de la compo							
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Stationard Stat	County: (Multiple) on number, sample typ	)	LDPR Code: FEPA8	Job Code: NJ10 TSFF							
C	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):  Y Northing	El	heck one) PE (meters) DOP	Sample Reference ID:								
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  Superior Superio	County: (Multiple) on number, sample typ	)	FEPA8	Job Code: NJ10 TSFF							
D REMARKS:	GPS Coordinates (Record Coordin  X Easting	ates in UTM Zone 15 NAD 83 Only):  Y Northing	E	heck one) PE (meters) DOP	Sample Reference ID:								



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Collector's Name		en	Tour		Description of Shipment							
(Please Print)	¥	<b>-</b> • •	rsechn	ي متن				Shipped-Carrier:	*** 1 1			
Affiliation:	HSI C	KCRO	NERO Oth and	SERO	SLRO	SWRO	WPP	Tape sealed and in	utialed	N.	060	~ 7
(circle one)	DGLS	HWP	Other:	<del></del>				x Hand Delivered			Of Containe	ers:
Sample Number	Sample			Anal	lyses			Sample		For Lab Us		
	Collected		.=		<u> </u>			Туре	Matrix	Containe		Preserved
	Date:	Hexavalent C							Water	IL amber	_ 120 mL	$H_2SO_A$
1000426		Percent Mois	ture				1	Grab	√Soil	Cubitainer		$MNO_3$
7 00 .26	1-76-10						1	x Composite	Organic		Ia <b>lgen</b> e	NAOH
(Sample A)								Modified	Sludge	1 8 oz glass	$-^{IL}$	HCL
For Lab Use O <b>nl</b> y	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	_500mL	4° C(None)
AR111171	1120				1		1 1			Encore	250mL	Disinfected
AB14476				<u> </u>			1			Other:		Other
	Date:	Hexavalent C							Water	IL amber	_120 mL	$H_2SO_4$
(000427	1-26-10	Percent Mois	ture				Į.	Grab	<b>√</b> Soil	Cubitainer		HNO 3
' ' '	1						<u> </u>	x Composite	Organic Organic		Talgene	NAOH
(Sample B)			r <u></u>	T	1		<b></b>	Modified	Sludge	1 8 oz glass	$-^{1L}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Тетр.	Other:	Other:	Other:	VOA vial _	_500mL	4 ° C(None)
AB14477	1020	•								Encore	250mL	Disinfected
V 15/7 / / /					l		1			Other:		Other
	Date:	Hexavalent (					]		Water	IL amber	$-^{120  mL}$	$H_2SO_4$
		Percent Mois	ture					Grab	Soil	Cubitainer		HNO 3
(0,0,0,0)							]	x Composite	Organic		lalgene	NAOH
(Sample C)	T:	<b>.</b>	-	1			Ta	Modified	Sludge	8 oz glass	$-\frac{IL}{2000}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	_500mL	4° C(None)
										Encore _	$-^{250mL}$	Disinfected
	D .	<u> </u>		<u> </u>						Other:	100 1	Other
	Date:	Hexavalent (						0.1	Water	IL amber	- <sup>120</sup> mL	$-\frac{H_2SO_4}{H_2SO_4}$
		Percent Mois	ture					Grab	Soil	Cubitainer		HNO <sub>3</sub>
(Comple D)							ļ	x Composite Modified	Organic		lalgene	NAOH
(Sample D)	T:	D 0	E1	1 77	Ic	т	lou		Sludge	8 oz glass	$-\frac{IL}{500}$	HCL
For Lab Use Only	Time:	D.O	Flow	рH	Spec. Cond.	1 emp.	Other:	Other:	Other:	VOA vial	$-\frac{500mL}{250}$	4° C(None)
										Encore Other:	250mL	Disinfected Other
D.11		<u> </u>		<u> </u>	ID <b>A</b> / ID		<u> </u>		<u> </u>	Other.		Oiner
Relinquished By:	met	1 Ho	$\frac{1}{2}$	$\bigcirc$	Received By		Thom.	Man.	Date: 2-11	-10	Time:	110
Relinquished By:		1/2			Received By	:		V	Date:	1	Time:	11-
Relinquished By:					Received By				Date:		Time:	
remiquished by:					Received By	•			Dale.		i iine:	

Sample I.D. Letter	r Site Description											
Sample	•	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF							
<b>A</b>		ates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID: 225								
Sample	Facility ID: Sample Comment (briefly describe	LDPR Code: FEPA8	Job Code: NJ10 TSFF									
В	X Easting	nates in UTM Zone 15 NAD 83 Only):  Y Northing  Site/Study Name:	Accuracy (check one)  EPE (meters) PDOP  County:	Sample Reference ID:								
Sample	Facility ID: Sample Comment (briefly describe	LDPR Code: FEPA8	Job Code: NJ10 TSFF									
	X Basting	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:								
Sample	Facility ID: Sample Comment (briefly describe	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF								
DEMARKS.	GPS Coordinates (Record Coordin  X Easting	Sample Reference ID:										

REMARKS:



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B-5

Collector's Name	: 7	7.	1		<del> </del>			Description of Shipment				
(Please Print)	<b>†</b>	en	HOW	$\sqrt{a}$				Shipped-Carrier:				
Affiliation:	ESP	KCRO	NERO	SERO	SLRO	SWRO	WPP	Tape sealed and i	nitialed			4
(circle one)	DGLS	HWP	Other:					x Hand Delivered			. Of Contain	ers:
Sample Number	Sample			Anal	VSAS			Sample		For Lab U	se Only	
Sample Number	Collected			Auai	y s c s		<del></del>	Туре	Matrix	Contai	ner	Preserved
	Date:	Hexavalent C	Chromium , TO	OC, pH,					Water	1L amber	120 mL	$H_2SO_4$
1000dia		Percent Mois	ture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	Al)		Grab	√ Soil	Cubitainer		$MNO_3$
1000429	1-26-70	j						x Composite	Organic	~	Nalgene	NAOH
(Sample A)								Modified	Sludge	1 8 oz glass	$-^{IL}$	<u>HCL</u>
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	24° C(None)
40111170	1322						ļ			Encore_	250mL	Disinfected
AB14478										$\int Other Z   \Omega$		Other
	Date:		hromium, TO						Water	IL amber	120 mL	$H_2SO_4$
1000430		Percent Mois	ture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	Al)		Grab	Soil	Cubitainer		HNO 3
	1-26-10							x Composite	Organic		Nalgene	NAOH
(Sample B)								Modified	Sludge	8 oz glass	$-^{1L}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	$24^{\circ}$ C(None)
4/11/11/10	1020	}	ĺ		]		}			Encore	250mL	Disinfected
AB14479			L	L						Other 20		Other
	Date:		Chromium , TO						Water	1L amber	120 mL	$H_2SO_4$
		Percent Mois	sture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	Al)		Grab	Soil	Cubitainer		HNO 3
								x Composite	Organic	2 oz glass	Nalgene	NAOH
(Sample C)			<del></del>		····			Modified	Sludge	8 oz glass	$-^{1L}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
					ļ					Encore	250mL	Disinfected
			<u> </u>	<u> </u>		<u> </u>	<u> </u>			Other:		Other
	Date:		Chromium , TO						Water	IL amber	120 mL	$H_2SO_4$
		Percent Mois	sture, ORP, To	tal Metals (Fe,	Mn, Mo, V, A	Ai)		Grab	Soil	Cubitainer		HNO 3
(Camaria D)		Ì						x Composite	Organic		Nalgene	NAOH
(Sample D)	T:	D 0	le.	T	la 6 1		10.1	Modified	Sludge	8 oz glass	$-\frac{lL}{l}$ .	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
									-	Encore Other:	-250mL	Disinfected
D.11 1.1 1.D			<u> </u>	<u> </u>	5 4 1 7 1 5		<del>  ===</del>			Other:	lm:	Other
Relinquished By:	/ /m2 }	4 Ha	·	C	Received By	234	Mond		Date: 2-1	1-10	Time:	1058
Relinquished By:					Received By:				Date:	<u> </u>	Time:	<u> </u>
Relinquished By:	ed By:					Received By:			Date: Time:			
								<u>L</u>	_			

Sample I.D. Letter													
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Mult on number, sample	iple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF							
A	GPS Coordinates (Record Coordin X Easting	Sample Reference ID:											
	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Mult		LDPR Code: FEPA8	Job Code: NJ10							
Sample	Sample Comment (briefly describe	where and how the sample was collected, stationally st	on number, sampl			TSFF							
В	GPS Coordinates (Record Coordin X Easting	nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID: 225								
	Facility ID:	Site/Study Name:  Tannery Sludge Farm Fields	County: (Mult	iple)	LDPR Code: FEPA8	Job Code: NJ10							
Sample	Sample Comment (briefly describe	e type, etc.):		TSFF									
		nates in UTM Zone 15 NAD 83 Only): Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:								
	Facility ID:	Site/Study Name:  Tannery Sludge Farm Fields	County: (Mult	i	LDPR Code: FEPA8	Job Code: NJ10							
Sample	Sample Comment (briefly describe	e type, etc.):		TSFF									
D	GPS Coordinates (Record Coordin  X Easting	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:								
DEMARKS.													

IKEMAKKS:



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Collector's Name	ame: Sean Counihan							Description of Shipment				
(Please Print)	<del>-</del>			~===				Shipped-Carrier:		<del>.</del>		
(	ESP	KCRO HWP		SERO	SLRO	SWRO	WPP	Tape sealed and in	itialed	No. 4	OS Cambain	ers: 3
(circle one)	DGLS	HWP	Other:					x Hand Delivered	<del></del>		Of Contain	ers: 3
Sample Number	Sample			Anal	vses			Sample		For Lab Us		
	Collected				, - · ·			Туре	Matrix	Containe		Preserved
	Date:	Total Metals	(Cr)						Water	1L amber	120 mL	$H_2SO_4$
1000501		11.						x Grab	Soil	Cubitainer		∫ HNO ₃
	01/26/10	Hex. C	Vine					Composite	Organic		lalgene	NAOH
(Sample A)								Modified	Sludge	_8 oz glass	<i>1L</i>	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	_	Other:	Other:	Other:	VOA vial	_500mL	4° C(None)
O Augusto	1627			68.1	483	12.7°C				_Encore _	250mL	Disinfected
AB14142				u 50	(0 30/3	10110	<u> </u>			Other:		Other
	Date:	Total Metals	(Cr)						) Water	IL amber	120 mL	$H_2SO_4$
1000502		1/2/	C ./					x Grab	Soil	_Cubitainer		HNO ₃
(0.1.0)	01/26/10	Hex.	Sm2					Composite	Organic		lalgene	NAOH
(Sample B)	·							Modified	Sludge	8 oz glass	$-^{1L}$	HCL.
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial _	_500mL	4° C(None)
AGULLA	1635		1			1			ļ_	_Encore	250mL	Disinfected
A614143						<u>=</u>				Other:		Other
	Date:	Total Metals	(Cr)						Water	IL amber	$ \frac{120 \ mL}{}$	$H_2SO_4$
1000503		110						x Grab	Soil	_Cubitainer		T HNO 3
(0.1.0)	01/26/10	Hex. C	Sme					Composite	Organic		lalgene	NAOH
(Sample C)	<del></del>							Modified	Sludge	8 oz glass	$-^{1L}$	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
n And HILL									-	$\frac{Encore}{}$	250mL	Disinfected
AB14144							<u> </u>			Other:		Other
	Date:	-							Water	IL amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
n								Grab	Soil	_Cubitainer		HNO 3
(Cample D)								Composite	Organic		Valge <b>ne</b>	NAOH
(Sample D)					la a 1		Io.	Modified	Sludge	$-\frac{8 \text{ oz glass}}{1000 \text{ cm}}$	$-\frac{lL}{con}$	HCL
Fo <b>r La</b> b Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	<i>VOA vial</i> _	500mL	4° C(None)
,									-	_Encore _	250mL	Disinfected
		<u> </u>	<u> </u>							Other:	leni.	Other
Relinquished By:	, CR	all			Received By	m	dos		Date: 1-20	1-10	Time:	1129
elinquished By:			Received By:			Date: Time:						
											<u> </u>	
Relinquished By:					Received By	:			Date:		Time:	ļ
					<u> </u>							

Sample I.D. Letter	Site Description											
	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County:	anan	LDPR Code: FEPA8	Job Code: NJ10TSF						
Sample A	Sample Comment (briefly describe Sample from well head Loc. 102 Applied Speciation Dottle #	where and how the sample was collected, static	n number, sampl	e type, etc.):	TEIAG	F						
1000501	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID: Parcel 33	383						
	Facility ID:	Site/Study Name:  Tanney Slade Fram Fields  where and how the sample was collected, static	County: Buch	anen	LDPR Code:	Job Code:						
	Field Blank	where and how the sample was collected, station  *** **BOF 3U 3	n number, sampl									
100502		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID: Parcel 33	883						
`	Facility ID:	Site/Study Name:  January Slades form Fields  where and how the sample was collected, static	County: Buch	anan	LDPR Code:	Job Code:						
	Duplicate Applied Specietion Bottle F	\$ B0 239 /mic	n number, sampl									
1000 503		rates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID: Parcel 33	383						
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:						
Sample D	Sample Comment (briefly describe	where and how the sample was collected, statio	n number, sampl	e type, etc.):								
U		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:							
REMARKS:												



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Collector's Name	. (	0 -	Cau	riban	Description of Shipm					ent		
(Please Print)		<u>lan</u>			CLDO	CIVID C	WDD	Shipped-Carrier:	24-1-4			
Affiliation: (circle one)	ESP) DGLS	KCRO (FWP	NERO Other	SERO	SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	maied	No. Of Containers: 4		
(circle Oile)		XIWI	) Olice							b Use Only		
Sample Number	Sample Collected			Anal	yses			Sample Type	Matrix Co			
		Hexavalent C	'heamine (	27				- 1 pe	Tana E and	The state of the s		
	Date.	Hexavalent C	, romium	% Moist	me my			Grab	Soil Capital			
1000300	1-27-10							x Composite	Organic 5 4 2 oz glo			
(Sample A)								Modified	Sludge 8 oz gl			
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other: VOA vi			
Mulasa	1435			1					Encore			
Ab14289				<u> </u>			<u> </u>		Others			
	Date:	Hexavalent C	hromium	% Moist	m)			Grab	Water IL aml Soil Cubita	her $*=120$ mL $H_2$ SO. $_4$ hiner $HNO_3$		
1000301	1-27-10	}						x Composite	Organic 20 2 2 oz gl			
(Sample B)								Modified	Sludge 8 oz gl			
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	<b>VOA</b> ν	The control of the co		
鑑け かっしゃ かんりこぼ	1440								Encore	250mL Disinfected		
A014240								<u> </u>	Other	AND THE CONTRACT OF THE CONTRA		
	Date:	Hexavalent (	Chromium 6	To mois	+ m /			G1		ber 120mL H <sub>2</sub> SO <sub>4</sub>		
1000307	1-27-10							Grab x Composite	Soil Gubita Organic 12-oz gl	iner HNO <sub>3</sub> ass Nalgene NAOH		
(Sample C)								Modified		ass IL HCL		
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ial 500mL 4°C(None)		
				ľ	1	-	1		Encor	250mL Disinfected		
A614291	1449					<u> </u>			* Other:	reconstruction of the base of position and district and an article of the base		
	Date:	Hexavalent (	Chromium,	To Moist	M7					her <u>I20 mL</u> H <sub>2</sub> SO <sub>4</sub>		
(1000303	1-27-10	1	•	-				Grab	Soil Cubita			
(Sample D)	11.000	1						x Composite Modified	Organic 2 2 oz gi			
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp	Other:	Other:		ial 500mL 4° C(None)		
	1457			r					Encore	e 250mL Disinfected		
AB14292									Other:			
Relinquished By:	( d	M			Received By		2th /1	annon	Date: 2/2/10	Time: 11:15		
Relinquished By:	nnot	h Ha	$n \sim n^{\gamma}$		Received By		Rno	him	Date: 2/2/10	Time: 115k		
Relinquished By:	V) WW	LECV	· V · V II ·	<u> </u>	Received By	:	,, , , , , , , , , , , , , , , , , , ,		Date:	Time:		
					<u> </u>			· 				

Sample I.D. Letter	Site Description										
	Facility ID:	1	County:	LDPR Code:	Job Code:						
	Sample Comment (buisfinder the	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample A	Y 1	where and how the sample was collected, station	on number, sample type, etc.):		TSFF						
<b>~1</b>		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	. Antemprine	W. New Yields	EPE (meters) PDOP	319							
·	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
	Sample Comment (huisfly Jamel)	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample B	Y2	where and how the sample was collected, station	on number, sample type, etc.):		TSFF						
		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	Wilasing		EPE (meters) PDOP	319							
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
	Sample Comment (hwiefly describe	Tannery Sludge Farm Fields where and how the sample was collected, static	(Multiple)	FEPA8	NJ10						
Sample C	Y3	•		31 ms	TSFF						
		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	X in wante	X Youngs	EPE (meters) PDOP	319							
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample D	Y4	e where and how the sample was collected, station	on number, sample type, etc.):		TSFF						
		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	Xlagring	Y Yanamara I	EPE (meters)	1319							
REMARKS:	<u> </u>										
HWP: Michael S	troh '	•									
		*									
	RUN	LAB DUP ON	1000300								
			1000 300								
				***							



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Sample Number Collected Analyses Sample Type Matrix Container Preserved Matrix Composite Container Con	
Sample Number  Sample Number  Date: Hexavalent Chromium, 70 worst with Spec. Cond. Temp. Other: Othe	
Sample Number    Sample Collected	
Date: Hexavalent Chromium, 70 most ms. Spec. Cond. Temp. Other: Other: Trype Matrix Container Preserved (Grab Louis) (Sample A)  For Lab Use Only Time: D.O Flow pH Spec. Cond. Temp. Other: Other: Water Transfer Louis Ms. Composite Cubitativer Studge Modified Studge Sozglass TL. HCL. Other: Other	
Grab   Soil   Cubitainer   HNO3   X Composite   Grab   Soil   Cubitainer   HNO4   X Composite   Modified   Studge   Sozelass   H.   HCL	
Grab	
Composite   Comp	
Modified   Sludge   8 oz glass   1L   HCL	
Date:   Hexavalent Chromium   Off Moist   Ms   Disinfer   Other   Ot	74
ABILIZATION Date: Hexavalent Chromium, 9% Moist, M5  Grab  X Composite Modified Studge  Bacore 250mL Other: Other	one)
Date: Hexavalent Chromium, 7% Moist, MS  Grab  Composite  Modified  Date: Hexavalent Chromium, 7% Moist, MS  Composite  Modified  Sludge  Soil  Cubitainer  HNO3  NAOH  Modified  Sludge  Soil  Copganic  Soil  Cubitainer  HNO3  NAOH  Modified  Sludge  Soil  Copganic  Flow  Holl  Holl  Date: Hexavalent Chromium  Mater  Journal  Holl  Grab  Copganic  Journal  Holl  Journal  Holl  Journal  Holl  Journal  Holl  Journal  Journal  Holl  Journal  Holl  Journal  Journal  Journal  Journal  Journal  Holl  Journal  Journal  Journal  Journal  Journal  Journal  Journal  Journal  Holl  Journal  Journ	
Composite   Comp	
Composite   Comp	4
Composite   Comp	
Modified   Sludge   & ozglass   IL   HCL.	
ABIYA94 1026  Encore 250mL Disinfer Other: Other:    Date:   Hexavalent Chromium   76   Moist   Most   Most	
1026	one)
Date: Hexavalent Chromium 7 Moist M3  Grab  1-27-10  Date: Hexavalent Chromium 7 Moist M3  Grab  x Composite  Grab  x Composite  Grab  x Composite  Organic  T 2-oz glass Nalgene  NAOH	
Date: Hexavalent Chromium 7 Moist M3  Grab  1-27-10  Date: Hexavalent Chromium 7 Moist M3  Grab  x Composite  Grab  x Composite  Grab  x Composite  Organic  T 2-oz glass Nalgene  NAOH	
x Composite Vorganic T2-oz-glass Nalgene NAOH	4
A Composite Seguito 1 202 gains margene 1 mon	
(Sample C)	
(Sample C) Modified Sludge 8 oz glass IL : HCL	
For Lab Use Only Time: D.O Flow pH Spec. Cond. Temp. Other: Other: Other: VOA vial 500mL 14°CA	lone)
1037 Lisinfe	cted
Ab14295 1037 District Others Others	15000
Date: Hexavalent Chromium 76 most 55 Grah 1 Soil Cubildings HNO.	4
X Composite Type 1 2 by State 1 1 2 by St	A** (4)
(Sample D) Modified Slidge 8 oz glass 11 HCL	
For Lab Use Only Time: D.O Flow pH Spec. Cond. Temp. Other: Other: Other: Other: VOA vial 500ml; / 4° CA	
ABIVALE 1046   Sencore 250mL Distinfication of them:  Other: Other	
Relinquished By: Date: // Time:	
Kenneth Hannon 2/2/10 11:15	
Received By A Date:	
Kenneth Hannon Jak Muse 2/2/10 1157	
Relinquished By: Date: Time:	

Sample I.D. Letter	Site Description										
		Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10						
Sample A	Sample Comment (briefly describe $\mathcal{D} \mathcal{U} \mathcal{T} \mathcal{S}$	where and how the sample was collected, stati	on number, sample type, etc.):		TSFF						
A	<ul> <li>Provide production of the programming of the programming of the production.</li> </ul>	ates in UTM Zone 15 NAD 83 Only):	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:							
Sample	•	Site/Study Name: Tannery Sludge Farm Fields where and how the sample was collected, stati	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF						
В	Y L  GPS Coordinates (Record Coordin  X Hazenia	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:							
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name: Tannery Sludge Farm Fields where and how the sample was collected, stati	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF						
	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID: 305							
Sample D	-	Site/Study Name: Tannery Sludge Farm Fields where and how the sample was collected, stati	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF						
D 		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID: 365							
REMARKS: HWP: Michael S	troh										
	RUN L	AB Dup on	1000 304	_							



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LABORATORY ORDER ID: 100202 002

Collector's Name:	< /	ean	<i>C</i>	ihan					Description of Shipment			
(Please Print) Affiliation:		KCRO -	NERO	SERO	SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and in	itialed			
(circle one)	DGLS	HWP			5210			x Hand Delivered		No. Of	Containers: 4	
Sample Number	Sample	<del></del>		Anal	VSPS			Sample		For Lab Use C		
	Collected							Туре	Matrix	Container	Preserved	
1 1	Date:	Hexavalent C	hromium ,	Po most	m5			Grab	Water   Soil	IL amber Cubitainer	20 mL H <sub>2</sub> SO <sub>4</sub> .	
1000308	(-27-10							x Composite		L2 oz glass Nalj	477.000	
(Sample A)				·	·			Modified	Sludge 📑	💮 8 oz glass 💹 1	L HCL	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	A STATE OF THE STA	500mL 4° C(None)	
A614298										Encore 2	250mL Disinfected Other	
	Date:	Hexavalent C	Chromium (	To Moist	ms				Water	A CONTRACTOR OF MINISTER CONTRACTOR	20 mL H <sub>2</sub> SO <sub>4</sub>	
1000309	מנאמו		,	/6 *** ~ /				Grab	Soil	Cubitainer  2 oz glass Nal	HNO <sub>3</sub>	
(Sample B)	1-26-10							x Composite  Modified	Organic Sludge		gene   NAOH. IL HGL **	
	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	4.00 (A)	500mL T4°C(None)	
AB14298	1150									Encore Other:	250mL Disinfected Other	
,	Date:	Hexavalent C	Chromium	% MOISO	MS				Water	1L amber =		
1000310	1-26-10			70 111 -				Grab x Composite	∦ Soil Urganic ::	Cubitainer 2007 Nal	gene NAOH	
(Sample C)								Modified	Sludge		IL HCL	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	ouer.	TO THE STATE OF TH	500mL	
A614 <b>299</b>	1202									Encore Other:	250mL Disinfected Other	
	Date:	Hexavalent (	Chromium	To mois	54 M)				Water	L amber		
1000311	1-26-10		,	, 0				Grab x Composite	Soil Organic	Cubitainer 35	gene FINO 3	
(Sample D)								Modified	Sludge	8 oz glass	1L HCL	
For Lab Use Only	Time: 1122	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Outer	KOA vial		
A014300										Encore Other:	250mL Disinfected Other	
Relinquished By:	1				Received By	Kan	oth.	Hannin	Date:	10	Time: 11:15	
Relinquished By:	meth	Har	mon		Received By: Punk Punk			A	Date: 7/7/	110	Time: 1158	
Relinquished By:	Drw.	<u> </u>	· · · · · · · · · · · · · · · · · · ·		Received By			3	Date:		Time:	

Sample I.D. Letter											
		Site/Study Name: Tannery Sludge Farm Fields	County: (Mult	iple)	LDPR Code: FEPA8	Job Code: NJ10					
Sample	Sample Comment (briefly describe	where and how the sample was collected, stati	ion number, sample	e type, etc.):	 	TSFF					
A		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one) EPE (meters) PDOP	Sample Reference ID: 3 0 5						
C1	Facility ID:  Sample Comment (briefly describe	iple)	LDPR Code: FEPA8	Job Code: NJ10							
Sample B	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	EPE (meters)	Sample Reference ID:	TSFF					
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, state	County: (Multion number, sample		LDPR Code: FEPA8	Job Code: NJ10 TSFF					
C	GPS Coordinates (Record Co	Sample Reference ID:									
	Facility ID:	Site/Study Name:  Tannery Sludge Farm Fields e where and how the sample was collected, state	County: (Mult		LDPR Code: FEPA8	Job Code: NJ10					
Sample D	Y3	•				TSFF					
		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)  EPE (meters)  PDOP	Sample Reference ID:						
REMARKS: HWP: Michael S	troh										



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			I AND CII	AIII-OI-C		ECOKD	1	ABORATORY ORD	ER ID:	100202000		
ollector's Name	: 60	an (	ouri, ha	h				Shipped-Carrier:	Descrip	tion of Shipment		$\exists$
			NEDO		SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	nitialed	No. C	of Containers: 4	
Sa <b>mple N</b> umber	Sample Collected			Analy	yses			Sample Type	2 Matrix	For Lab Use Containe	Kirangeriko Kapatan pala 🗼 Alak	
(000 317 (Sample A)	Date:	Hexavalent C	Chromium ,	Moist m	>			Grab _x Composite Modified	Water Soil Organic Sludge	Cubitainer  2 oz glass Na 8 oz glass	HNO: algene NAOH IL HCL	
or Lab Use Only Hb1430 <b>2</b>	Time: 1134	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL	ed>
\000 313 (Sample B)	Date:	Hexavalent C	Chromium /	Po Moist	an S			Grab x Composite Modified	Water Soil Organic Sludge	L amber Cubitainer 2 oz glass N 8 oz glass	HNO <sub>3</sub> algene NAOH	
or Lab Use Only 46143 <b>62</b>	Time:	D.O		рН	Spec. Cond.	Тетр.	Other:	Other:	Other:	VOA vial Encore Others	500mL	
100 0 3/1 4 (Sample C)	Date:	Hexavalent (	Chromium	70 MOIS	, ms			Grab x Composite Modified	Water   Soil   Organic   Sludge	Cubitainer  2 oz glass N  1 8 oz glass	120 mL H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HNO <sub>3</sub> Algene NAOH HCL	
or Lab Use Only ADI 4303	Time: 0930	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other	Encore Other:	Other*	ted
(Sample D)	Date:		Chromium 5	0 MO15+	V4 5	·		Grab x Composite Modified	Water Soil Organic Sludge	All Control of the Co	HNO3: algene NAOH 1L HCL	
or Lab Use Only AD14304	Time: 6910	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:		\$500mL   4°C(Non \$250mL Disinfects Other \$2	ted
Relinquished By:	(6)	ll			Received By:	Kenn	eth i	Hannon	Date:	2/10	Time: /1:/5	
clinquished By:	ennet	1 Ha	nnøn		Received By	101	km	Liga	Date: 2/-2	110	Time: 1159	
Relinquished By:					Received By	:			Date:	•	Time:	

Sample I.D. Letter	Site Description										
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample A	Y4	e where and how the sample was collected, station	on number, sample type, etc.):		TSFF						
<b>7</b>		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	N. Laxaring	A. New Livings	EPE (meters) PDOP	1 320							
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
	Samula Carrent A. J. S. J.	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample B	Sample Comment (briefly describe		TSFF								
	GPS Coordinates (Record Coordinates)	Sample Reference ID:									
	X Betsand	320									
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
	Sample Comment the defendance	Tannery Sludge Farm Fields e where and how the sample was collected, station	(Multiple)	FEPA8	NJ10						
Sample C	Y 1		TSFF								
	GPS Coordinates (Record Coordi	Sample Reference ID:									
	X)Ligning	Y houning	EPE (meters) PDOP	1 265							
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
	Sample Comment (briefly describ	Tannery Sludge Farm Fields e where and how the sample was collected, static	(Multiple)	FEPA8	NJ10						
Sample D	2	e where and now the sample was conected, state	m number, sample type, etc.):		TSFF						
ע		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	X/Layding	N Northing	EPE (meters) PDOP	325							
REMARKS:											
HWP: Michael S	tron										
	RUN LA	B Dup on 10	000315								



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Collector's Name	P	m 爾d	- E 1/1 17				Description of Shipment					
(Please Print) Affiliation:	ESP		HERO	SERO	SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and in	itialed			
(circle one)	DGLS	CHWP					*****	x Hand Delivered		No. C	Of Containe	rs: <b>4</b>
Sample Number	Sample			Ana	vses			Sample		Hor Lab Use	e Only	
	Collected							Туре	Matrix	Containe	730 701	Preserved
	Date:	Hexavalent C	Chromium	moist	_ in 5			Comb	Vater Soil	UL ambei Cubitainer	_120 mL	H <sub>2</sub> SO <sub>4</sub> . HNO <sub>3</sub>
1000316	1-26-10			, ,				Grab x Composite	Organic		lalgene:	NAOH
(Sample A)	·							Modified	Sludge	8 oz glass	$\hat{I}_L$	HCL "
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Others .	VOA vial		4° C(None)
AB14305	0900		ŀ						200	Encore	_250mL	Disinfected Other
1.07	Date:	Hexavalent (	Chromium ,	To moist	m7				Water	1L amber	_120 mL	H <sub>2</sub> SO <sub>4</sub>
1000317		1	<b>'</b> .					Grab	Soil Section	Cubitainer	),	HNO <sub>3</sub>
(Sample B)	(-26-10	-						x Composite Modified	Organic i Sludge	2 oz glass N 18 oz glass	aigene 1L	NAOH HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Oiher:	2 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100	4° C(None)
ABIY 30 6	0920									Encore	250mL	Disinfected
HB1430	Date:	Hexavalent (	71		w s				Water	Other: Lamber	120 mL	Other H <sub>2</sub> SO <sub>4</sub>
1000000	Date.	Hexavalent (	onromium •	To moist	, W >			Grab	Soil	Cubitainer	WAY IIIL	HNO 3
1000318	1-26-10							x Composite	Organic	"2:oz∙glass ≀\	Valgene	NAOH :
(Sample C)			1	T ==	In	T	lo.	Modified	Sludge	8 oz glass	_!L	HCL :
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	300 S 3 238 1 1 1 0 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	500mL 250mL	4° C(None) Disinfected
A614308									### ### ### ### ######################	Other:		Other
	Date:	Hexavalent (	Chromium	To moist	_ M3				Water	1Lamber	_120 mL	142SO
1000319	1-21010			70 1110.5				Grab x Composite	Soil Organic	Cubitainer  2 oz glass N	Valgene	HNO,
(Sample D)								Modified	Sludge	8:0z glass	IL.	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:		≥500mL	14°C(None)
A614308	0940									Encore Other	250mL	Disinfected Other
Relinquished By:	(A)	Nal	(de)		Received By	1Cen	neth	Hannon	Date: 2/2	110	Time:	1215
Relinquished by:	meti	Ha	nno		-Mad	73	Date: 7/7	110	Time:	200		
Relinquished By:					Received By	:			Date:		Time:	

Sample I.D. Letter	Site Description    Country   Lab Code   Lab Code										
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample	Sample Comment (briefly describe	where and how the sample was collected, static	on number, sample type, etc.):		TSFF						
$\mathbf{A}$	CPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	<u></u>						
	Vilentia	Notations	EPE (meters)	<b>-</b> -	į						
			PDOP	1 525							
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample B	Sample Comment (briefly describe	where and how the sample was collected, station	on number, sample type, etc.):		TSFF						
D		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	Xiasing	Y Noshing	EPE (meters	4 37 <i>C</i>							
			PDOP	100)							
'	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
	Sounds Comment Control of the State of the S	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample	DUIS	where and how the sample was collected, stati			TSFF						
	Industrial control of the control of	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	X/basing/	Se Yorkining	EPE (meters PDOP	1.565							
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:						
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10						
Sample D	71	e where and how the sample was collected, stati			TSFF						
•		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:							
	X Pasang	™ Vorannag 	EPE (meters	326							
REMARKS:											
HWP: Michael S	troh (										



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Collector's Name:	Ĵ	Am.	1 -1-11						Description	of Shipment		
(Please Print)	<u> </u>		HHEK	LER				Shipped-Carrier:				
	ESP DGLS	KCRO	TERO Other	SERO	SLRO	SWRO	WPP	Tape sealed and in x Hand Delivered	itialed	No Of	Containers: 4	1
(circle one)		EW P	Other						T	or Lab Use		
Sample Number	Sample			Anal	yses	-		Sample		Parallel Statement of the Committee of t	Considerated	
	Collected							Туре	Matrix	Container_	. 12 Thomas High Conformation, 1997	erved
	Date:	Hexavalent C	Chromium , C	To Moist	m <sup>s</sup>				ACCOUNT OF THE PROPERTY OF THE PARTY OF THE	CONTROL TO CONTROL OF THE CONTROL OF	20 mLH,S	37.5
1000320	1-2/-12		•	10 10,000				Grab	200000000000000000000000000000000000000	Cubitainer	. HNC	microphy at the second
(Sample A)	1-2670							x Composite  Modified		2 oz glass Nalj 8 oz glass		
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Tomn	Other:	Other:		the state of the s		(None)
		ال.ال	I TOW	pm	Spec. Cond.	remp.	Oulei.	Oulei.	Augustuber Colo. Se	THE PERSON OF TH	250mL Disir	(ixone) nfected
Ab14309	0950									Other	Othe	
	Date:	Hexavalent (	Chromium C	o moist	w s		<del></del>		Water	1Lamber -	20 mL	SO 4
(00=0=)			•	& WOIST	•			Grab	Soil	Cubitainer	HNC	$\mathcal{I}_3$
1000321	1-26-10							x Composite		2 oz glass Nal		
(Sample B)								Modified	and the second s	8 oz glass 💌 📑		
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:			(None)
AB1431D	1000						1			Encore — Other	250mI Disi Othe	nfected
1109010		TT -1-44	1	<u> </u>	M 5							SO 🚜
-	Date:	Hexavalent (	onromium 3	To moist	<i>30</i> (3			Grab	1 Soil	Cubitainer	HNO	
(000322	1-26-10							x Composite	G 20 C The Thirty Comment of the Com	2 oz glass Nal		
(Sample C)	1 20 10							Modified		8 oz glass		200
For Lab Use Only	Time:	D.O	Flow	рH	Spec. Cond.	Temp.	Other:	Other:	1100日日本出土日本中国大学中国大学中国大学	VOA vial ::	45. 24.2 WKG2K6K66	100000000000000000000000000000000000000
					1	_			102705	Encore		infected
A014312	1010									:Other:	Othe	
	Date:	Hexavalent (	Chromium	% MO152	m					1L amber 🐇 🕾		SO <sub>4</sub>
1000777		J		10 11013				Grab	Soil	<u>Cubitainer</u> : **	HNO	30 20 Miles
1000323	1-26-10							x Composite		_2 oz glass Nai		
(Sample D)	T'	D 0	Im	1 77	lo o . 1	lm.	0.1	Modified	Sludge	A TOTAL NAME OF THE PERSON OF	IL HCI	33.5
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	1 emp.	Other:	Other:	2000 CO			C(None) infected
AB1431A										Other	Other	
Relinguished By:	D C	dock	COL.		Received By	Cenn	eth b	lannon	Date: 2/2//	D .	Time: //:/5	,
Relinquished By.	neth	Han	m		Received By		2 10r	Liz	Date: 2/7/1	Ò	Time: 70 \	
Relinquished By:	1.3.	<i></i>	<u> </u>		Received By				Date:		Time:	

Sample I.D. Letter												
, (K) ( )	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:						
• •		Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10						
Sample A	Y2	e where and how the sample was collected, station	on number, sampl	<b>.</b>		TSFF						
<b>₽</b>		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:							
	ol itasime,	N Northbas		PDOP	326							
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:						
	Some la Command Andrew St. 3	Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10						
Sample B	<u> </u>	e where and how the sample was collected, station	on number, sampl	e type, etc.):		TSFF						
		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:							
	Lineard X	V Sometime		PDOP	326							
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:						
•		Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10						
Sample C	Y4	e where and how the sample was collected, station	on number, sampl			TSFF						
		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:							
	Xilaying }	Y winds	-	EPE (meters) PDOP	326							
	Facility ID:	Site/Study Name:	County:	ti1\	LDPR Code:	Job Code:						
	Sample Comment thriafly describe	Tannery Sludge Farm Fields e where and how the sample was collected, stati	(Mult		FEPA8	NJ10						
Sample D	DUIS  DUIS	where and now the sample was conceied, stau	on number, samp			TSFF						
	A CORRESPONDED TO A STATE OF THE CONTRACTOR OF T	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:							
	Xicasing	. Y. \तः चर्तापदः 		EPE (meters) PDOP	326							
REMARKS:												
HWP: Michael S	troh											
	RUN LX	B Dup on 120	00321		·							
l												



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Collector's Name:									Description of Shipment			
(Please Print)  Affiliation:	ES <b>P</b>		NERO		SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and in	itialed			
(circle one)	DGLS	HWP	Other:					x Hand Delivered			Containers	s: <b>4</b>
Sample Number	Sample Collected			Analy	yses			Sample Type	Matrix	For Lab Use. Container	Calculation Co.	Preserved
	Date:	Hexavalent C	hromium	Po moist	MS				Naer so .			$H_2SO_{4+}$
1000 324 (Sample A)	1-27-10		,	, -				Grab x Composite Modified	Soil Organic Sludge	Cubitainer D2 öz gláss Nal 8 öz gláss	gene	HNO 3 : NAOH : HCL -
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:			500mL	L4°C(None)
AB14315	0820									Encore Other:	250mL	_Disinfected Other
,	Date:	Hexavalent C	hromium	To moist	ms				200 C 100 C	II amber	120 mL	_H,SO,-
(000325 (Sample B)	(-2710							Grab _x_Composite Modified	Soil Organic Sludge			HNO 3 NAOH : HCL
For Lab Use Only		D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	740004045 (C. 1005059) (C. 100759		I 4° C(None)
A014 315F	0835						<u>.</u>			Encore MOther:	250mL	Disinfected Other
	Date:	Hexavalent C	Chromium	To moist	m3						120 mL	_H <sub>2</sub> SO₄;
100326 (Sample C)	(-27-10		,					Grab x Composite Modified	Soil Organic Sludge		lgene	HNO₃ NAOH HCL'
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:		2 3 2 13 13 13 2 2 3 5 1 1 N	E4° C(None)
AD14315	0850									Other:		Disinfected Other
	Date:	Hexavalent C	Chromium 4	To Moist	MS				Water Soil	IL amber	120 mL	H <sub>2</sub> SO,
1000327	1-27-10	ł	•					Grab x Composite	2 Control 10 4 2 2 2 2	Cubitainer F 2 oz glass Na	lgene –	HNO₃ NAOH
(Sample D)								Modified	Sludge	*8.ozglass	îl 🗆	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Qther.y			L 4° C(None)
A64316										Encore: Other:		Disinfected Other
Relinquished By:	JQ L	Dack	Çw.		Received By	Kenn	eth h	lannon	Date: 2/2/	10	Time: //	15
Relinquished By:	met	1 HO	inno	$\gamma$	Received By	Link	Rund	Jannon	Date: 2/7/		Time: 12	07
Relinquished By:					Received By	•		0	Date:	-	Time:	

Sample I.D. Letter		Site Descrip	tion			
7/	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
. : •		Tannery Sludge Farm Fields	(Multi		FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, stati	on number, sample	type, etc.):		TSFF
A	1 1					
A		ates in UTM Zone 15 NAD 83 Only):	Accuracy		Sample Reference ID:	
	i Garing	W. New Physics		EPE (meters) PDOP	312	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multi		FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, stati	on number, sample	type, etc.):		TSFF
В	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	ļ
	N iskant	Ť Na dida:		EPE (meters)	717	
				PDOP	312	
	Facility ID:	Site/Study Name:	County:	:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multi	<u> </u>	FEPA8	NJ10
Sample C	Sample Comment (briefly described)	where and how the sample was collected, stati	ion number, sample	type, etc.):		TSFF
C	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
·	XLacing	X You himney		EPE (meters) PDOP	312	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multi	<u> </u>	FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, stat	ion number, sample	type, etc.):		TSFF
D	DUIS					
l D		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X chrong	Y You thing	<u> </u> _	EPE (meters)	312	
				PDOP		
REMARKS:	· · · · · · · · · · · · · · · · · · ·					
HWP: Michael S	tron					
•		·				
				•		



Collector's Name:

Sample Number

1000328

(Sample A)

or Lab Use Only

1000329

(Sample B)

For Lab Use Only

Ab14318

**DGLS** 

Sample

Collected

1-26-10

1525

-26-10

1530

Date:

Time:

Date:

Time:

Date:

Please Print)

Affiliation:

(circle one)

#### MISSOURI DEPARTMENT OF NATURAL RESOURCES FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

Page 1 of 2

180262602 LABORATORY ORDER ID: **Description of Shipment** PAM HACKLER Shipped-Carrier: NERO KCRO SLRO SWRO Tape sealed and initialed **SERO** WPP No. Of Containers: Other: x Hand Delivered For Lab Use Only Sample Analyses Type Matrix Container Preserved Hexavalent Chromium H,SQ. alLamber 120 mL To moist ms Cubitainer  $HNO_3$ Grab I 2 öz glass \ Nalgene≠ Organic x Composite \*NAOH 8 oz glass 🛂 IL HCL Modified Sludge 1 4° C(None) D.O Flow VOA vial pН Spec. Cond. Temp. Other: Other: Other: 500mL Encore 250mL Disinfected Other: Other " Hexavalent Chromium --- Water 1Lamber 120 mL H<sub>2</sub>SO<sub>4</sub> % moist MS HNO 3 Soil Cubitainer Grab Organic #12-oz glass Nalgene NAOH. x Composite Modified Sludge 8 oz glass 1L HČL : D.O VOA vial 500mL 4° C(None) Flow pН Spec. Cond. Temp. Other: Other: Other: Encore 250mL Disinfected Other Others Hexavalent Chromium Invist Water IL amber 120 mL  $H_2SO_4$ 

1000330 (Sample C)	1-26-10			10 MOIST				Grab x Composite Modified	Organic 4 Sludge	Cubitainer 2-oz-glass Nalgen 8-oz-glass ILL	HGL I
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:			mL 1 4º C(None)
AB14328	1535									Encore 230 Other:	mE Disinfected <sup>®</sup> Other
,	Date:	Hexavalent (	Chromium	70 MOS	f m)				Water **		mL H <sub>2</sub> SO <sub>4</sub>
(Sample D)	1-26-10		,		-			Composite Modified	Organic -	Cubitainer: 2 oz glass : Nalger 8:oz:glass : 1L	
For Lab Use Only ABIU 320	Time: 1545	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	1000	VOA vial 500 Encore 250 Other:	
Relinquished By:		v Obe	NO		Received By	: Cenne	th He	annon	Date: 2/2//		111K
Relinquished By	inner	L Ha	mmm		Received By	rink	$\mathcal{O}$	1	Date: 7/2/10		1.605
Relinquished By:					Received By				Date:	Tin	ne:

Sample I.D. Letter	•												
	Facility ID:	Site/Study Name:		County:		LDPR Code:	Job Code:						
•			dge Farm Fields	(Mult		FEPA8	NJ10						
Sample A	Sample Comment (briefly	describe where and how the sa	ample was collected, statio	on number, sampl	e type, etc.):		TSFF						
<b>73.</b>		l Coordinates in UTM Zone 15		Accuracy		Sample Reference ID:							
	N. Encoding		in Change		PDOP	313							
	Facility ID:	Site/Study Name:		County:		LDPR Code:	Job Code:						
	Comple Comment (but C		dge Farm Fields	(Mult		FEPA8	NJ10						
Sample B	Sample Comment (briefly			TSFF									
D		l Coordinates in UTM Zone 15		Accuracy	(check one)	Sample Reference ID:							
	N Bagang	A transfer for the state of the	kortiving		PDOP	313							
•	Facility ID:	Site/Study Name:	1 70 70	County:		LDPR Code:	Job Code:						
	Sample Command the Same		adge Farm Fields	(Mult		FEPA8	NJ10						
Sample C	Y3	describe where and how the s					TSFF						
	\$ marketing and a second secon	d Coordinates in UTM Zone 15		Accuracy	(check one)	Sample Reference ID:							
	X Basing		ho hag = = =	-	PDOP	313							
	Facility ID:	Site/Study Name:	idaa Earra Eialda	County:		LDPR Code:	Job Code:						
	Sample Comment (briefly	describe where and how the s	idge Farm Fields ample was collected, static	Mult on number, sampl		FEPA8	NJ10						
Sample D	Y 4			on number, samp	c type, etc.j.		TSFF						
		d Coordinates in UTM Zone 15		Accuracy	(check one)	Sample Reference ID:							
	X ilacing		You (Mine	ļ	EPE (meters) PDOP	313							
REMARKS: HWP: Michael S	troh												
	RUN	LAB DO	up on	1000	329								
						•							



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	PIR		I AND CH	AIII-OF-C	OSTODII	RECORD	L	ABORATORY ORD	ER ID:	100202002	<del>\                                    </del>	Ψ <i>J</i>
ollector's Name		an Co	o which					Shipped-Carrier:	Descr	iption of Shipment		
ffiliation: ircle one)	ESP		NERO	SERO	SLRO	SWRO	WPP	Tape sealed and initialed  x Hand Delivered No. Of Con-			f Containe	rs: 4
Sample Number	Sample Collected			Anal	yses			Sample Type	Matrix	For Lab Use Container	en Fighten soare a tid.	Preserved
1006333 (Sample A)	1-26-10		Chromium	% NOIS <del>t</del>	m3			Grab x Composite Modified	Water Soil Organic Sludge	1L anther Cubitainer 2 az glass Na 8 az glass	lgene	H 2SO 4 HNO3 = 1 NAOH ■ HCL
or Lab Use Only AB1432 <b>2</b>	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial : Encore Other:	500mL 250mL	14° C(None) Disinfected Other
)000334 (Sample B)	Date: 1-27-10	Hexavalent C	Chromium	Po moist	m s			Grab x Composite Modified	Water Soil Organic Sludge	Cubitainer  2 oz glass Na 8 oz glass	120 mL ilgene 1L	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL=
or Lab Use Only ABI4 32 <b>3</b>	Time: 1435	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other
000335 (Sample C)	Date:	Hexavalent (	Chromium /	70 moist	n)			Grab  x Composite  Modified	Water Soil Organic Sludge	IL amber Cubitainer  2 oz glass Na 8 oz glass	120 mL algene -11	H₂SO₄ HNO₃ NAOH HCL
or Lab Use Only ABIY 323	Time: (4 40	D.O	Flow	рН	Spec. Cond.	Тетр.	Other:	Other:	Other Special columns (Fig. 1)	VOA vial Encore Other	500mL 250mL	4º C(None) Disinfected Other
000336 (Sample D)	Date:		Chromium	To MOIST	ms			Grab x Composite Modified	Water Soil Organic Sludge	IL amber Cubitainer J 2 oz glass No 8 oz glass		H <sub>2</sub> SO; HNO; NAOH HCL
For Lab Use Only ANY 325	Time: 1449	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other.	VOA vial s Encore Other:	250mL	4° C(None) Disinfected Other
Relinquished By:	'ul	Sell			Received By	Kenn	eth /	tannon	Date: 2	/2/10	Time:	1:15
Relinquished By:	ennet	L Ha	mor	\	Received By	Dun	L D	who	Date: 2	2/10	Time:	204
Relinquished By:					Received By	:		0	Date:		Time:	

Sample I.D. Letter												
	Facility ID:		County:	LDPR Code:	Job Code:							
1		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10							
Sample	<b>*</b>	where and how the sample was collected, statio	on number, sample type, etc.):		TSFF							
Δ	DuIS											
<b>A</b>		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:								
	A Laging	W Monthage	EPE (meters) PDOP	313								
	Facility ID:		County:	LDPR Code:	Job Code:							
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10							
Sample B	Sample Comment (briefly describe		TSFF									
D		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:								
	X Lasting	No. 5 Habita	EPE (meters)	301								
?	Tr. 1124 PT		PDOP									
l	Facility ID:	Site/Study Name:  Tannery Sludge Farm Fields	County:	LDPR Code:	Job Code:							
١ _	Sample Comment (briefly describe	Tannery Studge Farm Fields where and how the sample was collected, statio	(Multiple)	FEPA8	NJ10							
Sample C	42	· •			TSFF							
	Ladadinate contribit on this property and a statement of the technical	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:								
3	XLiving	Z. And mitte	EPE (meters) PDOP	701								
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:							
	Comple Comment Carlot I	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10							
Sample	Sample Comment (briefly describe	e where and how the sample was collected, static	он number, sample type, etc.):		TSFF							
	1 7.5											
D	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:								
_{-1 \	PERSONAL PRODUCTION CONTRACTOR SERVICES AND ASSESSMENT OF THE PERSON OF	Y in time	EPE (meters)	301								
;_ REMARKS:	1	1	i irdor		<u> </u>							
HWP: Michael S	troh*											
		VV	100-0									
	KUN L	LAB DUP ON	1440333									
		<del>~</del>			<del></del>							



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LABORATORY ORDER ID:

100202000

Collector's Name	ollector's Name: Sean Counthan								Description of Shipment			
(Please Print)		ean						Shipped-Carrier:				
	ESP		NERO	SERO	SLRO	SWRO	WPP	Tape sealed and in	itialed		À	
(circle one)	DGLS	HWP	Other:					x Hand Delivered No. Of Containers:				
Sample Number	Sample			Anal	****			Sample	10 10 10 10 10 10 10 10 10 10 10 10 10 1	<b>For Lab Use</b>	Only :	
Sample Number	Collected			Aliai	yses			Туре	Matrix	Container	Preserv	ed ·
	Date:	Hexavalent C	Chromium c	P6 M015+	ms	<u> </u>	***		Water -	41Lamber	120 mL H 2SO	4
1000000			,	18 MOIST				Grab	Sovi	Cubitainer	HNO <sub>3</sub>	
1000337	1-27-10	)						x Composite	Organic	12 őz glass 🛭 Nai		Sec. 185207
(Sample A)								Modified	Sludge	8 oz glass 🕸		
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL 4° C(N	lone)
1 No. 1 more	1457					,				Encore	250mL Disinfe	
AB14325	1771									Other:	Other	
	Date:	Hexavalent (	Chromium ,	% Moist	MS				www.	lL:amber 💨 🦳	120 mL H <sub>2</sub> SO	4
1000 338				70 MOISI				Grab	talsSell ∰	Gubitainer	HNO;	
'	1-27-10							x Composite	****Organic	2 oz glass Na		[ 2 ]
(Sample B)								Modified	Sludge 🤲		IL HCL.	
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	A 100 A	500mL: 4°CO	
0111) 774	/									Service Action to the Control of the	250mL Disinfe	
AB14328			<u> </u>	<u> </u>						Other:	Other	
	Date:	Hexavalent (	Chromium :	To moist	ms				Water	IL amber		
1000339	1-27-10	ļ		10 MINIST				Grab	Soil:	Cubitainer	HNO <sub>3</sub>	10000
II	1-21-10	1						x Composite	Organic	2 oz glass Na		* Manual X 1942
(Sample C)	<u> </u>			<b>y</b>	·	r		Modified	Sludge	X	IL HCL	4000000
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:		500mL	
AN4328	1430									(A)	250mL Disinfo	
14014700		<u> </u>	<u> </u>	<u> </u>			<u> </u>			:::Other:	Other	de l'inchigent des la constitution de la constituti
	Date:	Hexavalent (	Chromium 1	To Mois	(m)				Water		120 mL H <sub>2</sub> SQ	
1000340	1 1		/	10				Grab	Soil	Cubitainer	HNO,	C : 101990916900669
11	1-2770							x Composite	Organic	2 oz glass Na		10.00
(Sample D)	Tr'	D 0	In:	T	Ta	lm.	امر-	Modified	Sludge	8 oz glass	1L HCL	1 0 NOT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	CONCESSOR CONTRACTOR C	500mL 4° CA	
A44328	1434		ł							Encore Other	250mL Disinf Disinf	
Relinquished By:		777	<u></u>		Received By	: ,	. , ,	<i>1</i>	Date: /	/	Time:	
	V1_	-sell			1	Konn	eth b	lannon	1 2/2	-//0	11:15	
Relinquished By:		11 1	1	··	Received By	:^	1. 1		Date:	1.0	Time: 1-7/6	
	enne	the by	anno	m		Lenk	Mo	lannon	2/2	[10	1705	
Relinquished By:				Received By:			Date: Time:					
									<u> </u>			

Sample I.D. Letter		Site Descript	ion		
	Facility ID:	, ·	County:	LDPR Code:	Job Code:
1	Sample Comment (hairfle 3 2 2	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
Sample A	A 4	where and how the sample was collected, station	on number, sample type, etc.):		TSFF
A		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	
5	A Bayang	N. Shrilime	EPE (meters) PDOP	301	
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
1	Somple Comment Co. 1. 5	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
Sample	Sample Comment (briefly describe		TSFF		
D L		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	
6	Witasing		EPE (meters) PDOP	301	
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
	Sample Comment C. C. T.	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
Sample	Y1	e where and how the sample was collected, station			TSFF
		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	
7	<u> शुक्तार्गर</u> ्	No mange	EPE (meters) PDOP	304	
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
<u> </u>	(G ) C	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
Sample	Sample Comment (briefly describe	e where and how the sample was collected, station	on number, sample type, etc.):		TSFF
D	Y2 DUPLICAT				
l D	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	
5	N Earlang	Y vo time.	EPE (meters) PDOP	304	
REMARKS:					
HWP: Michael S	troh i				
	KUN LA	B Dup on 100	20 33 0		
		1			
<u> </u>					



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LABORATORY	ORDER ID:	100202	995

Collector's Name	~ Ke	1.1	S	_			Description of Shipment					
(Please Print) Affiliation:			NERO	SERO SERO	SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and in	itialed			
(circle one)	DGLS	TWP.			SLICO	SWKO	WIL	x Hand Delivered	indica	No. Of 0	Container	s: 4
Sample Number	Sample	7		Anal	yses			Sample		For Lab Use C	<u>Dnly</u>	
-	Collected							Type	Matrix	Container	A 0 10 10	Preserved
		Hexavalent C	hromium	Tomoist	m >			Grab		I Lamber 1 Cubitainer		H <sub>2</sub> SO <sub>4</sub>
1000341	1-27-10		,					x Composite		12 oz glass Nalg	350, 319, 31	NAOH
(Sample A)								Modified	Sludge :	8 oz glass 💛 1	L [	HCL.
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:		A PART OF THE PART	00mL	4° C(None)
AB14329	1438									Encore2 :: Others	50mL	Disinfected Other
	Date:	Hexavalent C	hromium Č	2 muist	m5					The second secon	20 mL	_H <sub>2</sub> SO ₄
1000342	1 -7-1			() VIII -				Grab		Cubitainer		_HNO₃
(Sample B)	(-21-)	( '						x Composite  Modified	Organic Sludge	2 oz glass Nalg 8 oz glass 1	2000250000000000	NAOH* HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:		500mL	4° C(None)
A614330	1440								48000001 1000000000000000000000000000000	Encore 2 Other:	250mL	Disinfected Other
	Date:	Hexavalent C	Chromium	Zo moi	ca ms				Water	97	120 mL	H <sub>2</sub> SO <sub>4</sub> +3
1000343	1-27-10		/	10 MIO.	74			Grab		Cubitainer 💹		HNO <sub>3</sub>
(Sample C)	1.61-10							x Composite  Modified		2 oz glass Nalg 8 oz glass –	gene IL	NAOH HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other		38,000	4° C(None)
	1450										250mL	Disinfected
AB14332	Date:	Howardont C	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				<u> </u>		Water	*Other: **Lamber	120 mL	Other :: H <sub>2</sub> SO <sub>4</sub>
	1	nexavalent (		% MO.5	4 413		•	Grab	I Soil	Cubitainer		HNO
1000344	1-27-0							x Composite	Organic	2 oz gláss – Naly	gene	NAOH.
(Sample D)			T	<del></del>	I	=	1-2	Modified	Sludge		lL	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:		A SERVICE AND REPORT OF THE PROPERTY OF THE PR	500mL 250mL	4° C(None) Disinfected
A614332	1500						1			Other:		Other
Relinquished By: Rec					Received By	Dur	K O	ndoge	Date: 2/2	110	Time:	206
Relinquished By:				Received By		· · · · · · · · · · · · · · · · · · ·	<del>J</del>	Date:		Time:		
Relinquished By:				Received By	•			Date:		Time:		

Sample I.D. Letter	Site Description										
		Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)		LDPR Code: FEPA8	Job Code: NJ10					
Sample A	110	where and how the sample was collected, stationary of the sample was collected, statio	on number, sample type, e	tc.):		TSFF					
A	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):	Accuracy (check EPE (	meters)	Sample Reference ID: 304						
	•	Site/Study Name: Tannery Sludge Farm Fields where and how the sample was collected, stati	County: (Multiple) on number, sample type, e		LDPR Code: FEPA8	Job Code: NJ10					
Sample B	72	•				TSFF					
0	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check EPE (	meters)	Sample Reference ID:						
	•	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)		LDPR Code: FEPA8	Job Code: NJ10					
Sample	43	where and how the sample was collected, stati	on number, sample type, e			TSFF					
1	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check EPE (	(meters)	Sample Reference ID:						
	_	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)		LDPR Code: FEPA8	Job Code: NJ10					
Sample D	Sample Comment (briefly describe	e where and how the sample was collected, stati	ion number, sample type, e	etc.):		TSFF					
D V	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  W. Nordhing	Accuracy (check	(meters)	Sample Reference ID: 304						
REMARKS: HWP: Michael S	troh										
		•			·						
			•								



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							L	ABORATORY OF	RDER ID:	1002020	02		
Collector's Name	ector's Name:								Description of Shipment				
(Please Print) Affiliation: (circle one)	ESP KCRO NERO SERO DGLS HWP Other:				Y) E≯GH SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and initialed x Hand Delivered		No. Of Containers:			
Sample Number	Sample Collected			Ana	lyses			Sample Type	Matrix	Eor Lab Use Containe	K. Kalendari and A. C. Jack	Preserved	
1006345 (Sample A)	1-27-10			& MU				Grab  x Composite  Modified	Water Soil Soil Soil Soil Soil Soil Soil Soil	A CONTRACTOR OF THE PARTY OF TH	TL .	H , SO , N HNO , NAOH HCL	
For Lab Use Only Ab1433 <b>3</b>	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other	VOA vial Encore Other:	500mL	_4° C(None) Disinfected Other	
00634 ( (Sample B)	Date:	MOIST WOLLD							Water  Soil  Organic ≈  Sludge	LL amber Cubitainer  2 oz glass No 8 oz glass.	120:mL	H <sub>3</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL	
For Lab Use Only Ab14 334	Time: \ 500	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL ] 250mL	4° C(None) _ Disinfected _ Other	
1000347 (Sample C)	Date:	10 MOIS1							Water Soil Organic Sludge	11 amber Cubitainer 2 oz gláss N 8 oz gláss	120 mL algene	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL	
For Lab Use Only Ab 14 335	Time: LS10	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	Encore Others	500mL 250mL	4° C(None). Disinfected Other	
(Sample D)		1-27-10							Water Soil Organic Sludge	Liamber Cubitainer 2 ozglass N 8 ozglass	algene 1L	H <sub>2</sub> SQ <sub>4</sub> HNO <sub>3</sub> NAOH HCL	
For Lab Use Only ABI4336	Time: 1520	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other.	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other	
Relinquished By: /anneths Hannon						Received By:  Pressived By:				Date: 2/7/10		Time: 1207	
Keiniquisnet by.						Received by.				Date:		Time:	
Relinquished By:					Received By	<b>":</b>			Date:		Time:		

Sample I.D. Letter		Site Descript	ion		
		Site/Study Name: Tannery Sludge Farm Fields Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Site/Study Name: Tannery Sludge Farm Fields Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Site/Study Name: Tannery Sludge Farm Fields Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Site/Study Name: Tannery Sludge Farm Fields Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Site/Study Name: Tannery Sludge Farm Fields Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Site/Study Name: Tannery Sludge Farm Fields Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Site/Study Name: Tannery Sludge Farm Fields Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Site/Study Name: Tannery Sludge Farm Fields Interest (Multiple) Interest (Record Coordinates in UTM Zone 15 NAD 83 Only):  Accuracy (check one) Interest (Control Coordinates in UTM Zone 15 NAD 83 Only): Interest (Control Coordinates in UTM Zone 15 NAD 83 Only): Interest (Control Coordinates in UTM Zone 15 NAD 83 Only): Interest (Country: Interest (Control Coordinates in UTM Zone 15 NAD 83 Only): Interest (Country: Interest (Multiple) Interest (Control Coordinates in UTM Zone 15 NAD 83 Only): Interest (Country: Interest (Multiple) Interest (Country: Interest (Country: Interest (Control Coordinates in UTM Zone 15 NAD 83 Only): Interest (Country: Interest (Co			
Sample A	Sample Comment (briefly describe	where and now the sample was collected, static	on number, sample type, etc.):		TSFF
A	<ul> <li>A Secretaria de la composição de la composiç</li></ul>	A STATE OF THE STA	EPE (meters)	1 <sup>-</sup> .	
	· ·	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
Sample B	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)		ISFF
	N Laving	Y See Aline	EPE (meters) PDOP		
	-	Tannery Sludge Farm Fields	(Multiple)		1
Sample	Y2	<u>.</u> ,	· · · · · · · · · · · · · · · · · · ·		TSFF
	GPS Coordinates (Record Coordin	TO MAKE A THE MORE THAN THE TOTAL CONTROL OF THE TO	EPE (meters)	Sample Reference ID:	
	•	Tannery Sludge Farm Fields	(Multiple)	1	ŀ
Sample D	Sample Comment (briefly describe	where and how the sample was collected, static	on number, sample type, etc.):	303	TSFF
D	GPS Coordinates (Record Coordin		EPE (meters)	Sample Reference ID:	
REMARKS: HWP: Michael S	troh				
	KUN L	NO DUD ON 1	900 345		
			•		



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								LABORATORY OR	DER ID:	100202000		
Collector's Name	: 1	PAM	Hazir	1 John 4	C 1 700 . 1 /	-				ption of Shipment		
(Please Print) Affiliation: (circle one)			NERO ) Other	SERO	SEAN (	SWRO	WPP	Shipped-Carrier: Tape sealed and x Hand Delivered		No. O	f Containe	ers: 4
Sample Number	Sample Collected			Ana	lyses			Sample Type	Matrix	For Lab Use Container		Preserved
1000349 (Sample A)	1-27-10			76 M CIST				Grab  x Composite  Modified	Water Soil Organic Sludge		lgene IL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> T NAOH HCL
For Lab Use Only 17614338	Time: 153 <i>0</i> (	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other	Encore	500mL 250mL	4° C(None) Disinfected Other
∞350 (Sample B)	Date: (-27-10	Hexavalent C	Chromium c	Po MOIS	t ms			Grab  x Composite  Modified	Water Soil Organic Sludge	L amber Cubitainer 2 oz glass No	120 mL Igene 11	H 2SO 4 HNO 3 NAOH HCL
For Lab Use Only Ab147338	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other
0003.5   (Sample C)	Date:	Hexavalent (	Chromium /	Dr mois	st ms			Grab  X Composite  Modified	Water Soil Organic Sludge	Cubitainer  2 oz glass Na 8 oz glass	8	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL
For Lab Use Only AB143 <b>38</b>	Time: 1254	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	1000 1000 1000 1000 1000 1000 1000 100	500mL 250mL	4° C(None) Disinfected Other
<i>0</i> 00352 (Sample D)	Date:		Chromium (	Pomois	st ms			Grab x Composite Modified	Water Soil Organic Sludge		120 mL ilgene 1L	H <sub>2</sub> SO <sub>4</sub> HNO; NAOH HCL
For Lab Use Only ABI434D	Time: 130Z	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial : Encore Other:	500mL 250mL	4° C(None) Disinfected Other
Relinquished By:	QC	Hack	W		Received By	Kens	reth	Hannon	Date:	2/10		775
	ennet.	a Har	nnon		Received By	"Dun	ck Pro	Hannon	Date: 2/	2/10	<del></del>	208
Relinquished By:					Received By	<i>7</i> :			Date:		Time:	

Sample I.D. Letter		Site Descrip	otion			
167	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
, .	1	Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10
Sample A	Sample Comment (briefly describe	e where and how the sample was collected, stati	ion number, sampl	e type, etc.):		TSFF
<b>13</b>		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X Bending	s V. Sarations		EPE (meters) PDOP	303	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10
Sample	Sample Comment (briefly describe	e where and how the sample was collected, stati	ion number, sampl	e type, etc.):		TSFF
В			·			L
	GPS Coordinates (Record Coordi	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	▼ Lagant			EPE (meters) PDOP	503	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10
Sample	Sample Comment (briefly described)	e where and how the sample was collected, stat	ion number, sampl	le type, etc.):		TSFF
	GPS Coordinates (Record Coordi	nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X Lasing	Y haine		EPE (meters) PDOP	306	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields		tiple)	FEPA8	NJ10
Sample D	Sample Comment (briefly describ	e where and how the sample was collected, stat	tion number, sampl			TSFF
<b>D</b>		nates in UTM Zone 15 NAD 83 Only):	Accuracy		Sample Reference ID:	
	Xilating	Y Northing		EPE (meters) PDOP	306	
REMARKS:	•					
HWP: Michael S	troh '	•				
					•	
		•				
MDNR Envir	ronmental Services Program	2710 West Main, Jefferson City, MO 65109	(573) 526-3315		MDNR-FSS-0	103 (03/08)



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LABORATORY ORDER ID: 100202002

Collector's Name	· _ <	ean	( 8000	iban				gl:10	Descripti	on of Shipment		
(Please Print) Affiliation:	ESP)	KCRO	NERO		SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and in	itialed			
(circle one)	DGLS	(HXWP	Other:					x Hand Delivered			f Container	s: 4
Sample Number	Sample Collected			Anal	yses			Sample Type	Matrix	For Lab Use  Container	v overesty or all	Preserved
	Date:	Hexavalent C	hromium ,	70-MOISE	1 m 5		<del></del>		Water -	dL amber	120 mL	H <sub>2</sub> SQ.
1000353	1-27-10		1	10 4 1013	1			Grab	L Söil	Cubitainer		HNO,
(Sample A)								x Composite  Modified	Organic Sludge	2 oz glass. Na 3 oz glass	200 PM 20	NAOH HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	A STATE OF THE PARTY OF THE PAR	500mL	T 4° C(None)
AB14341	1310									Encore :	250mL	Disinfected Other
	Date:	Hexavalent C	hromium 4	70 MOIS	of ms				: Water : U	Service of the CERT Chick Colors	120 mL	H <sub>2</sub> SO <sub>4</sub> 1.7
1006354	107.5		10		<b>-</b> 1			Grab	Soil	Cubitainer		HNO <sub>3</sub>
(Sample B)	1-27-10					·		x Composite  Modified	Organic Sludge	240z glass Na 80z glass	lgene IL	NAOH : HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
AB14342										Encore Others	250mL	Disin <b>fected</b> Other
	Date:	Hexavalent C	hromium	OZ MOIS	ct ms				Water	A SERVICE SERV	120 mL	H <sub>2</sub> SO₄
1000355	1-26-10	,	/	8 mons				Grab x Composite	Soil Organic	Cubitainer  2 oz glass Na	ılgen <b>e</b>	∴HNO₃ NAOH
(Sample C)	1 24 10							Modified	Sludge	8 oz glass	IL I	NAOL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	1000年間における第一大の大学であった。 1000年間における第一大学の大学である。	600 MIN (100 M ) 1 (100 M )	4° C(None)
AB14343	1610									Encore Other	250mL	Distrifected Other
	Date:	Hexavalent (	Chromium C	7, MOIS	+ M 3				Water 🔭 🤰	1L ambér	120 mL	$H_2SO_4$
1000356	1-26-10		•	0	•			Grab x Composite	Soil Organic	Cubitainer  2 oz glass Na	ilgene	_HNO;
(Sample D)								Modified	Sludge	8 oz glass	ÎL T	HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	450000X2002	500mL	4° C(None)
AB14346	1615	n								Encore Other:	250mL	Disinfected Other
Relinquished By:	mt	ah	w.		Received By		th Ho		Date: Z/2	110	Time: //	15
Relinquished By:	rnett	Han	mor		Received By		Rud		Date: 2 /7 /	10	Time:	209
Relinquished By:	UI WUC	1160/			Received By	:		δ <del>-</del>	Date:		Time:	

Sample I.D. Letter		Site Descript	ion			·
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multi		FEPA8	NJ10
Sample A	Sample Comment (briefly describe	where and how the sample was collected, station	on number, sample	e type, etc.):		TSFF
A.		ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	K Laging 4. 6.			EPE (meters) PDOP	306	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10
Sample B	Sample Comment (briefly describe	where and how the sample was collected, stations >	on number, sample	e type, etc.):		TSFF
Ъ		ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X Bassand	Le granting		EPE (meters)	306	
				PDOP	<u> </u>	
	Facility ID:	Site/Study Name:	County:	• • •	LDPR Code:	Job Code:
	Sounds Comment (huisfly describe	Tannery Sludge Farm Fields where and how the sample was collected, static	(Mult		FEPA8	NJ10
Sample C	Sample Comment (briefly describe	where and now the sample was conected, state	on number, sample	e type, etc.):		TSFF
C		nates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	Construction of the second of	X O Tings		EPE (meters) PDOP	302	
	Facility ID:	Site/Study Name:	County:		LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Mult		FEPA8	NJ10
Sample D	Sample Comment (briefly describe	where and how the sample was collected, station	on number, sample	e type, etc.):		TSFF
l D	GPS Coordinates (Record Coordin	ates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:	
	X Enving	Y Your mine		EPE (meters) PDOP	302	
REMARKS:						
HWP: Michael S	troh					
					•	
				•		

2710 West Main, Jefferson City, MO 65109



Page 1 of 2

B31

LABORATORY ORDER ID: 100202002

Collector's Name	:_	<i>(2 - )</i>							Description	on of Shipment		
(Please Print)	<u>~</u>	ean		nihar	\			Shipped-Carrier:		-,		
Affiliation:	ESP		3	SERO	SLRO	SWRO	WPP	Tape sealed and in	itialed	Na	Of Containe	ers: 4
(circle one)	DGLS	HWP.	Other:			<del></del>	<u></u>	x Hand Delivered	na D			ers. V
Sample Number	Sample	•		Analy	/ses			Sample	Marian Salah	For Lab Us		
	Collected							Туре	Matrix	Contain		Preserved
	Date:	Hexavalent C	hromium , 🤧	o moisi	1 ms				Water	1L amber	120 mL	$H_2SO_4$
1000000	-110		, ,	0	•			Grab	Soil	Cubitainer		HNO <sub>3</sub>
1000357	1-1-6							x Composite	Organic		Valgene	NAOH
(Sample A)						·		Modified	Sludge	8 oz glass	$-^{1L}$	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
AB14345	1625								(44)	Encore	250mL	Disinfected
11014.245							<u> </u>			Other:		Other
	Date:	Hexavalent C	hromium o	7 moist	, m S				Water	1L amber _	$-^{120  mL}$	$-\frac{H_2SO_4}{HNO}$
)00035 <del>9</del> )			(	0				Grab	Soil	Cubitainer	., }	HNO 3
'	1-26-10							x Composite Modified	Organic		Valgene	NAOH
(Sample B)	TO:	D.C.	771		g G 1	TD.	Tod	<del></del>	Sludge	8 oz glass	$-\frac{IL}{500}$	+ HCL
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	1 emp.	Other:	Other:	Other:	VOA vial _	$-\frac{500mL}{250mL}$	4° C(None)
A614346	1647									Encore Other:	250mL	Disinfected Other
1/019076	· · · · · · · · · · · · · · · · · · ·	TT 1			M 5		<u> </u>		Water	1L amber	120	H <sub>2</sub> SO <sub>4</sub>
	Date:	Hexavalent C	nromium	Z NOS				Grab	Soil	1L amoer ::: Cubitainer	$-^{120 mL}$	$-\frac{H_{2}SO_{4}}{HNO_{3}}$
1000350	1-26-10							x Composite	Organic		Valgene	$-\frac{NNO_3}{NAOH}$
(Sample C)	1.0010							Modified	Sludge	8 oz glass	1L	${HCL}^{NAOH}$
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
			I low	pri	spec. Cond.	remp.	Other.	Ollici.	Other.	Encore	250mL	Disinfected
AB14347	1650									Other:	- <sup>230m</sup>	Other
11101 / 57.	Date:	Hexavalent C	hromium			<u> 15</u>	1		Water	1L amber	120 mL	$H_2SO_4$
		TICXAVAIGH C		70 MO	154 V		W-14	Grab	Soil	Cubitainer		$-\frac{1}{HNO_3}$
(000360	1-2670		/					x Composite	/ Organic		Valgene	— <sub>NAOH</sub>
(Sample D)	l <b>`</b>	İ						Modified	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
The section of the se		,		•	•	•				Encore -	250mL	Disinfected
AB14348		$h \mathcal{L}$								Other:	<u>.                                  </u>	Other
Relinquished By:	7	óll a			Received By:	1/	41 4		Date: 2 / 2	-/10	Time:	1:15
Relinquished By:					Received By:	usne	W. 170	lanon	7 2	-//0	Times	
LG	nnet	1 Ha	mon		E E	Frink	Mudr	W.	Date: 2/7/	10	1	210
Relinquished By:					Received By	:	-		Date:	<u> </u>	Time:	_
				_				-				

Sample I.D. Letter		Site Descript	ion		
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, static	on number, sample type, etc.):	1	TSFF
A	Y3				
A		ates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	
	Adding the State of the State o	v Sor famo	EPE (meters)	302	
	T. W. TD	Ct. (Ct. 1 N	PDOP	<u> </u>	IX I G I
	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code:	Job Code:
	Sample Comment (briefly describe	where and how the sample was collected, statio		FEPA8	NJ10
Sample	\ 1 -7	• , , , , , , , , , , , , , , , , , , ,	a name of , sample of per, every.		TSFF
B		>LICATE # Z			
1		nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	
	12 a Xicasting in a	18 Y Northing	EPE (meters) PDOP	302	
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
	racinty id:	Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe	where and how the sample was collected, statio		FEFAO	i I
Sample	Y7 7	PLICATE #2			TSFF
$\mathbf{C}$			(1-1	Sample Reference ID:	
	Particular Control of the Control of	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)  EPE (meters)	4 *	
			PDOP	302	
	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
Sample	Sample Comment (briefly describe	where and how the sample was collected, statio	on number, sample type, etc.):		TSFF
l -	1) (1	5			
<b>D</b>	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	Accuracy (check one)	Sample Reference ID:	1
	e Xicasting	Barrer B. D. Cocining a see H see	EPE (meters)	302	
			PDOP	002	
REMARKS:	l.	0.1			
HWP: Michael St	cron .	RUN LAB DUP C	N 1000 357		
		•			
			•		



Page 1 of 2

LABORATORY ORDER ID: 100203001

Collector's Name	. Da	- 11								Descript	ion of Shipment		
(Please Print)	- THY	n Hx	ICKLE	Z					Shipped-Carrier:				
Affiliation:	(ESP)	KCRO	NERO	SERO	SLRO	SWRO	WPP		Tape sealed and ir	itialed			, 1
(circle one)	DGLS	HWP	Other						x Hand Delivered			. Of Contain	ers: 4
Sample Number	Sample			Anal	vses				Sample		For Lab U	se Only	
	Collected				.,				Туре	Matrix	Contai		Preserved
	Date:	Hexavalent C							-	Water	IL amber	120 mL	$H_2SO_4$
100636		Percent Mois	ture						<u> </u>	✓ Soil	Cubitainer		HNO 3
	1-26-10							~~÷	Composite	Organic		Nalgene	NAOH
(Sample A)	T:	D.O.	P1	1		Т	lou		Modified	Sludge	√8 oz glass	$-\frac{1L}{500}$	HCL 18 COV
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	1 emp.	Other:		Other:	Other:	VOA vial	$-\frac{500mL}{250mL}$	√ 4° C(None)  Disinfected
AB14350	1057										Encore Other:	250mL	Other
11011000	Date:	Hexavalent C	`hromium	<u> </u>						Water	IL amber	120 mL	$H_2SO_4$
		Percent Mois							≯ Grab	∨ Soil	Cubitainer		HNO <sub>3</sub>
1000362	1-26-10								✓ Composite	Organic	2 oz glass	Nalgene	NAOH
(Sample B)									Modified	Sludge	∨ 8 oz glass	<i>1L</i>	HCL
For Lab Use Only	Time:	<b>D</b> .O	Flow	pН	Spec. Cond.	Temp.	Other:		Other:	Other:	VOA vial	500mL	✓ 4° C(None)
00 14051	0946										Encore	250mL	Disinfected
AB 14351											Other:		Other
	Date:	Hexavalent C							1.001	Water	IL amber	120 mL	$H_2SO_4$ $HNO_3$
1000363	1-26-10	Percent Mois	sture						✓ Grab  ✓ Composite  ✓ Co	✓ Soil Organic	Cubitainer 2 oz glass	Nalgene	NAOH
(Sample C)	1 26-10							W	Modified	Sludge	✓ 8 oz glass	1L	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:		Other:	Other:	VOA vial	500mL	V 4° C(None)
	1200										Encore	250mL	Disinfected
AB14.352	. 200										Other:		Other
	Date:	Hexavalent C		<del>.</del>						Water	1L amber	120 mL	$H_2SO_4$
1000364	1-26-10	Percent Mois	sture						<u></u> ✓ Grab	√ Soil	Cubitainer		HNO 3
	1. 26-10							MS	x Composite	Organic		Nalgene	NAOH
(Sample D)	T:	D.O.	Flow	рН	C C 1	T	Tota		Modified Other:	Sludge	VOA vial	$-\frac{1L}{500mL}$	HCL
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	1 emp.	Other:		— Other:	Other:	Encore	300mL 250mL	✓ 4° C(None)  Disinfected
AB14353	1150					<i>0</i>					Other:		Other
Relinquished By:	0	etach			Received By:	wy .	elile	لسا	1	Date: 2-2-	10	Time:	,30
Relinquished By:	LL				Received By:	Bu	de 1	Ma	rel	Date: 2 , 2		Time:	138
Relinquished By:					Received By			ť		Date:		Time:	

Sample I.D. Letter		Site Descript	ion			
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple) on number, sample type		LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>A</b> 50	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):	EP	eck one) E (meters) OP	Sample Reference ID:	
Sample B	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  The station of the sample was collected.	County: (Multiple)	e, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>D</b>	2 Could a service of the service of	nates in UTM Zone 15 NAD 83 Only):  **YNorthing***	EP	eck one) E (meters) OP	Sample Reference ID:	
Sample	, , ,	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station  50,000	County: (Multiple) on number, sample type		LDPR Code: FEPA8	Job Code: NJ10 TSFF
C sa	GPS Coordinates (Record Coordin	nates in UTM Zone 15 NAD 83 Only):  Y Northing	EP	eck one) E (meters) OP	Sample Reference ID:	
Sample	Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields where and how the sample was collected, static	County: (Multiple) n number, sample type		LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>D</b>		nates in UTM Zone 15 NAD 83 Only):	EP	eck one) E (meters) OP	Sample Reference ID:	
REMARKS: HWP: Michael St	roh Expi	DITED 48 HR T	UPNAROU	ND		



Page 1 of 2

LABORATORY ORDER ID: 100 20 3001

Will Color												
Collector's Name	÷ 5	Am H	NEVI 4					China d C	Descripti	on of Shipmen	t	
(Please Print) Affiliation:	<u> </u>		NERO	SERO	SLRO	SWRO	WPP	Shipped-Carrier: Tape sealed and ir	itialed	<u>-</u>	<del></del> -	
Animation: (circle one)	ÆŜP DGLS	HWP	Other:		SLKU	SWKU	wrr	x Hand Delivered	iniaisi	Na	o. Of Contain	ers: 2
cacie one)		11111	Ouivi.	<u></u>				Sample		For Lab U		
Sample Number	Sample Collected			Anal	lyses		ė.	Туре	Matrix	Contai		Preserved
	Date:	Hexavalent C	hromium	<del></del>		· · · · · · · · · · · · · · · · · · ·		1	Water	1L amber	120 mL	$H_2SO_4$
	Date.	Percent Mois						∠Grah ⊾	√ Soil	Cubitainer		HNO,
1000365	1-26-10		Va. 0					Grab S Composite	Organic	2 oz glass	Nalgene	NAOH
(Sample A)								Modified	Sludge	✓ 8 oz glass	IL	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	√ 4° C(None)
no word	1310									Encore	250mL	Disinfected
AB14354				ļ						Other:		Other
	Date:	Hexavalent C		-					Water	1L a <b>m</b> ber	120 mL	$H_2SO_4$
1000366		Percent Mois	ture					- Grab	✓ Soil	Cubitainer		HNO <sub>3</sub>
	1-26-10						4	Composite Modified	Organic Sludge	2 oz glass	Nalgene	NAOH
(Sample B)	Time:	D.O	Flow	Lit	Cnoo Cond	Тоши	Other:	Other:	Other:	√ 8 oz glass VOA vial	$-\frac{1L}{500mL}$	HCL ✓ 4° C(None)
For Lab Use Only		ט.ען	LIOM	pН	Spec. Cond.	ı emp.	Otner:	— Other:	Oiner:	Encore	300mL 250mL	✓ 4° C(None)  Disinfected
AB14355	1330									Other:	— <sup>230mL</sup>	Other
	Date:	Hexavalent C	hromium		<del>-</del>		<del></del>		Water	1L amber	120 mL	$H_2SO_4$
1000367		Percent Mois	ture					✓ Grab	Soil	Cubitainer		HNO 3
100000							. ~	Composite	Organic	2 oz glass	Nalgene	NAOH
(Sample C)				<b>.</b>			4	Modified	Sludge	8 oz glass	<i>IL</i>	<u>HCL</u>
For Lab Use Only	Time:	D.O	Flow	pН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	4° C(None)
							1			Encore	250mL	Disinfected
	D	<u> </u>		<u> </u>		:-	<u> </u>		TH/ - /	Other:	120 1	Other
	Date:	Hexavalent C					ι	of Cook	Water Soil	IL amber Cubitainer	120 mL	$H_2SO_4$ $HNO_3$
		Percent Mois	iure				7	Grab  Composite	— Sou Organic	2 oz glass	Nalgene	-NAOH
(Sample D)								Modified	Sludge	8 oz glass	Naigene 1L	HCL
For Lab Use Only	Time:	D.O	Flow	рН	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	— <sub>500mL</sub>	4° C(None)
To the second	- *****	[				<b>F</b>			1	Encore	250mL	Disinfected
	Λ									Other:		Other
Relinquished By:	da	chi		Company of the Compan	Received By	onlie	ul St		Date: 2-2-10		Time:	630
Relinquished by:	-ul-	If her			Received By		1 1	aie	Date:	.10	Time:	.'38
Relinquished By:					Received By				Date:		Time:	

Sample I.D. Letter		Site Descript	ion		
Sample	Facility ID:  Sample Comment (briefly describe	Site/Study Name:  Tannery Sludge Farm Fields  where and how the sample was collected, station	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>A</b> 54		nates in UTM Zone 15 NAD 83 Only):  Y Northing	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
Sample	•	Site/Study Name: Tannery Sludge Farm Fields where and how the sample was collected, station	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
<b>B</b>		nates in UTM Zone 15 NAD 83 Only):  Y Normine	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	A.,
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name: Tannery Sludge Farm Fields where and how the sample was collected, static	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
C		nates in UTM Zone 15 NAD 83 Only):  Whorthing	Accuracy (check one)  EPE (meters)  PDOP	Sample Reference ID:	4
Sample	Facility ID: Sample Comment (briefly describe	Site/Study Name: Tannery Sludge Farm Fields where and how the sample was collected, static	County: (Multiple) on number, sample type, etc.):	LDPR Code: FEPA8	Job Code: NJ10 TSFF
D		ates in UTM Zone 15 NAD 83 Only):	Accuracy (check one) EPE (meters) PDOP	Sample Reference ID:	
REMARKS: HWP: Michael St	_	DITED 48HR +	TRN AROUND		



### Missouri Department of Natural Resources **Environmental Services Program**

Order ID 100211001 Program, Contact: HWP Julieann Warren

**Report Date:** 

03/18/2010

LDPR/JobCode:

FEPA8 / NJ10TSFF



AB14404 Sample:

Customer #: 1000354

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**59 SUIS** Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 202

Affiliation: ESP

Collect Date: 1/26/2010 2:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	11700000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	24400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	527000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	1340		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	35700		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.61	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	449	04	m∨	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.82		%	3,421	Infrared Drying
pH	рН	6.28	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.4	04	%	3,993	Contract Lab Dep

Sample: AB14405

**Customer #:** 1000355

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment: 18 SUIS**  Site: Tannery Sludge Farm Fields

Sample Reference ID: 203

Affiliation: ESP

Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	13400000	09	u <b>g</b> /kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	13300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	449000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	365	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	36400		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.42	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	433	04	mV	3,991	Contract Lab Dep

Customer #: 1000355

Facility ID:

County:

(Multiple)

Collector: KEN HANNON

**Sample Comment: 18 SUIS**  Affiliation: ESP

Site: Tannery Sludge Farm Fields

Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Percent Moisture	Percent Moisture	3.71		%	3,421	Infrared Drying
pH	рН	6.85	04	pH <b>Un</b> its	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.1	04	%	3,993	Contract Lab Dep

**AB14406** Sample:

Customer #: 1000356

Facility ID:

County: (Multiple)

Collector: KEN HANNON

42 SUIS Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 204

Sample Reference ID: 203

Affiliation: ESP Collect Date: 1/27/2010 12:56:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B <b>Met</b> als-Total Recoverable	Aluminum	18300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	25000000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	334000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	815	····	ug/k.g	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	45100		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.67	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	465	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.15		%	3,421	Infrared Drying
pH	pH	7.86	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.9	04	%	3,993	Contract Lab Dep

**AB14407** Sample:

Customer #: 1000357

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**Sample Comment:** 96 SUIS **Site:** Tannery Sludge Farm Fields **Sample Reference ID:** 205

Affiliation: ESP Collect Date: 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	34300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	410000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2070		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31900		ug/kg	3,884	SW 846 6010B

AB14407 Sample:

Customer #: 1000357

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 205

Affiliation: ESP

1/26/2010 11:00:00AM **Collect Date:** 

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.05	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	477	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	5.48		%	3,421	Infrared Drying
рН	рН	5.90	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.5	04	%	3,993	Contract Lab Dep

**AB14408** Sample:

Customer #: 1000358

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

109 SUIS

30 SUIS

96 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 209

Affiliation: ESP

Collect Date: 1/25/2010 2:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	7440000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	16000000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	649000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	259	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	19900		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.66	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	351	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4		%	3,421	Infrared Drying
pH	рН	7.87	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	0.81	04	%	3,993	Contract Lab Dep

Sample:

AB14409

Customer #: 1000359

Facility ID: County:

(Multiple)

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 210

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00PM

Qualifier Units QC Batch ID Method **Parameter** Result Test 6010B Metals-Total Recoverable Aluminum 12700000 09 ug/kg 3,884 SW 846 6010B 09 6010B Metals-Total Recoverable Iron 16300000 ug/kg 3,884 SW 846 6010B 6010B Metals-Total Recoverable Manganese 472000 ug/kg 3,884 SW 846 6010B

AB14409 Sample:

Customer #: 1000359

Facility ID: County:

(Multiple)

Collector: KEN HANNON

**Sample Comment:** 

30 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 210

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00PM

Parameter	Result	Qualifier	Units	QC Batch ID	Method
Molybdenum	328	05	ug/kg	3,884	SW 846 6010B
Vanadium	34200		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	0.22	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	352	04	mV	3,991	Contract Lab Dep
Percent Moisture	1.96		%	3,421	Infrared Drying
рН	7.87	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	0.47	04	%	3,993	Contract Lab Dep
	Vanadium Hexavalent Chromium Oxidation Reduction Potential Percent Moisture pH	Vanadium         34200           Hexavalent Chromium         0.22           Oxidation Reduction Potential         352           Percent Moisture         1.96           pH         7.87	Vanadium         34200           Hexavalent Chromium         0.22         04           Oxidation Reduction Potential         352         04           Percent Moisture         1.96           pH         7.87         04	Molybdenum         328         05         ug/kg           Vanadium         34200         ug/kg           Hexavalent Chromium         0.22         04         mg/Kg           Oxidation Reduction Potential         352         04         mV           Percent Moisture         1.96         %           pH         7.87         04         pH Units	Molybdenum         328         05         ug/kg         3,884           Vanadium         34200         ug/kg         3,884           Hexavalent Chromium         0.22         04         mg/Kg         3,996           Oxidation Reduction Potential         352         04         mV         3,991           Percent Moisture         1.96         %         3,421           pH         7.87         04         pH Units         3,992

Sample: **AB14410** 

**Customer #:** 1000360

Facility ID: County:

(Multiple)

Collector: KEN HANNON

**Sample Comment:** 

**53 SUIS** 

44 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 212

Affiliation: ESP

Collect Date: 1/27/2010 9:02:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12600000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	44300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	585000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	3210		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31400		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.60	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	469	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.02		%	3,421	Infrared Drying
рН	рН	6.61	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.5	04	%	3,993	Contract Lab Dep

Sample:

AB14411

Customer #: 1000361

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 213

Affiliation: ESP

Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	15000000	09	ug/kg	3,884	SW 846 6010B

AB14411 Sample:

Customer #: 1000361

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**Sample Comment:** 44 SUIS **Site:** Tannery Sludge Farm Fields **Sample Reference ID:** 213

Affiliation: ESP Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Iron	34400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	358000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2310		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	42200		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.83	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	407	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.95		%	3,421	Infrared Drying
pH	pH	6.62	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.5	04	%	3,993	Contract Lab Dep

Sample:

AB14412

**Customer #:** 1000362

Facility ID:

County: (Multiple)

Collector: KEN HANNON

25 SUIS

Sample Comment:

Site: Tannery Sludge Farm Fields Sample Reference ID: 214

Affiliation: ESP

Collect Date: 1/27/2010 11:18:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	13900000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	55400000	09	<b>ug</b> /kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	472000	09	<b>ug</b> /kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	5310		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	30600	11	ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.61	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	487	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	5.35		%	3,421	Infrared Drying
oH	рН	6.78	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.4	04	%	3,993	Contract Lab Dep

Sample: AB14413 **Customer #:** 1000363

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**Sample Comment:** 55 SUIS **Site:** Tannery Sludge Farm Fields **Sample Reference ID:** 215

Affiliation: ESP Collect Date: 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16800000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	18300000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	402000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	971		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	50500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	420	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.67		%	3,421	Infrared Drying
рН	рН	6.45	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.4	04	%	3,993	Contract Lab Dep

Sample:

AB14414

Customer #: 1000364

Facility ID:

County: (Multiple)

Collector: KEN HANNON

50 SUIS

**Sample Comment:** 

Site: Tannery Sludge Farm Fields Sample Reference ID: 216

Affiliation: ESP Collect Date: 1/26/2010 3:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	31500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	462000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	1620		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	40500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.69	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	422	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.06		%	3,422	Infrared Drying
рН	рН	6.81	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.1	04	%	3,993	Contract Lab Dep

**Customer #:** 1000365

Facility ID: County:

(Multiple)

Collector: KEN HANNON

**Sample Comment:** 103 SUIS Site: Tannery Sludge Farm Fields Sample Reference ID: 217

Affiliation: ESP

Collect Date: 1/26/2010 12:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	14000000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	40900000	09	u <b>g</b> /kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	298000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	3230		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	41900		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.79	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	468	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.36		%	3,422	Infrared Drying
рН	рН	5.91	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	6.4	04	%	3,993	Contract Lab Dep

Sample: AB14416

Customer #: 1000366

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**146 SUIS** 

**Sample Comment:** 

**Site:** Tannery Sludge Farm Fields **Sample Reference ID:** 218

Affiliation: ESP

Collect Date: 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	42500000	09	u <b>g</b> /kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	493000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2580		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	39300		<b>ug</b> /kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.83	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	444	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	8.60		%	3,422	Infrared Drying
pH	рН	7.59	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	6.3	04	%	3,993	Contract Lab Dep

AB14417 Sample:

**Customer #:** 1000367

Facility ID:

County: (Multiple)

Collector: KEN HANNON

55 SUIS **Sample Comment:** 

Site: Tannery Sludge Farm Fields Sample Reference ID: 219

Affiliation: ESP Collect Date: 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	19100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	21100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	517000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	602		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	45300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.11	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	475	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.11		%	3,422	Infrared Drying
рН	pH	6.34	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	1.3	04	%	3,993	Contract Lab Dep

Sample:

**AB14418** 

Customer #: 1000368

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**Sample Comment:** 150 SUIS Site: Tannery Sludge Farm Fields Sample Reference ID: 221

Affiliation: ESP Collect Date: 1/25/2010 5:04:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	<b>23600</b> 000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	21400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	356000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	514		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	52500		ug/k <b>g</b>	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	3.40	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	434	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.53		%	3,422	Infrared Drying
рН	pH	7.25	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.1	04	%	3,993	Contract Lab Dep

Customer #: 1000369

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

41 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 222

Affiliation: ESP

Collect Date: 1/25/2010 4:58:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	25700000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	23100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	456000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	701		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	59500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	3.29	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	4.22	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.90		%	3,422	Infrared Drying
pH	рН	7.38	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.2	04	%	3,993	Contract Lab Dep

Sample: AB14420

Customer #: 1000370

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**29 SUIS Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 202

Affiliation: ESP Collect Date: 1/26/2010 2:44:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	5.5	04	%	4,083	Infrared Drying

AB14421 Sample:

Customer #: 1000371

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 202

Affiliation: ESP

Collect Date: 1/26/2010 2:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.13	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

**79 SUIS** 

Customer #: 1000373

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 7 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 203

Affiliation: ESP

Collect Date: 1/27/2010 3:30:00PM

Test **Parameter** Qualifier QC Batch ID Result **Units** Method Hexavalent Chromium Hexavalent Chromium 0.39 04 mg/Kg 3,996 Contract Lab Dep 4.3 04 Percent Moisture Percent Moisture % 4,083 Infrared Drying

Sample: AB14424

Customer #: 1000374

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 27 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 203

Affiliation: ESP Collect Date: 1/27/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

Sample: AB14426

Customer #: 1000376

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**99 SUIS** 

Sample Comment:

**Site:** Tannery Sludge Farm Fields **Sample Reference ID:** 204

Affiliation: ESP

Collect Date: 1/27/2010 12:56:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.41	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	4,083	Infrared Drying

Sample: AB14427

Customer #: 1000377

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 23 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 204

Affiliation: ESP Collect Date: 1/27/2010 1:50:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.46	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.0	04	%	4,083	Infrared Drying

Customer #: 1000379

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**71 SUIS Sample Comment:** 

Affiliation: ESP

Site: Tannery Sludge Farm Fields

Sample Reference ID: 205

Collect Date: 1/26/2010 11:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

AB14430 Sample: Customer #: 1000380

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**34 SUIS** Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 205

Affiliation: ESP

Collect Date: 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.62	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

Sample: **AB14431** 

Customer #: 1000381

Facility ID:

(Multiple) County:

Collector: KEN HANNON

DUIS **Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 205

Affiliation: ESP

Collect Date: 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.63	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	4,083	Infrared Drying

AB14432 Sample:

Customer #: 1000382

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 209

Affiliation: ESP

Collect Date: 1/25/2010 2:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.69	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.8	04	%	4,083	Infrared Drying

**138 SUIS** 

Customer #: 1000383

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**144 SUIS** 

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 209

Affiliation: ESP

Collect Date: 1/25/2010 2:05:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.56	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

Sample: AB14435

Customer #: 1000385

Facility ID:

(Multiple) County:

Collector: KEN HANNON

Sample Comment: **15 SUIS**  Site: Tannery Sludge Farm Fields

Sample Reference ID: 210

Affiliation: ESP Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.24	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

Sample: **AB14436** 

Customer #: 1000386

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**62 SUIS Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 210

Affiliation: ESP Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.80	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

Sample: **AB14438** 

Customer #: 1000388

Facility ID:

(Multiple) County:

Collector: KEN HANNON

16 SUIS Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 212

Affiliation: ESP Collect Date: 1/27/2010 9:48:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.47	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

AB14439 Sample:

Customer #: 1000389

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**86 SUIS** Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 212

Affiliation: ESP

Collect Date: 1/27/2010 10:30:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.10	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.0	04	%	4,083	Infrared Drying

Sample: AB14440

Customer #: 1000390

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** DUIS Site: Tannery Sludge Farm Fields

Sample Reference ID: 212

Affiliation: ESP

Collect Date: 1/27/2010 9:02:00AM

Result Qualifier Units QC Batch ID Method Test **Parameter** Hexavalent Chromium Hexavalent Chromium 0.49 04 mg/Kg 3.996 Contract Lab Dep 3.0 04 % 4,083 Percent Moisture Percent Moisture Infrared Drying

Sample: AB14441

Customer #: 1000391

Facility ID:

(Multiple) County:

Collector: KEN HANNON

9 SUIS

15 SUIS

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 213

Affiliation: ESP

Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.54	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.6	04	%	4,083	Infrared Drying

Sample: AB14442

Customer #: 1000392

Facility ID:

(Multiple) County:

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 213

Affiliation: ESP

Collect Date: 1/26/2010 4:26:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.76	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

Customer #: 1000393

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Affiliation: ESP

Site: Tannery Sludge Farm Fields Sample Reference ID: 213

Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.70	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

**AB14444** Sample:

Customer #: 1000394

Facility ID:

(Multiple) County:

Collector: KEN HANNON

Sample Comment: **53 SUIS**  Site: Tannery Sludge Farm Fields

Sample Reference ID: 214

Collect Date: 1/27/2010 11:18:00AM Affiliation: ESP

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.39	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

**AB14445** Sample:

Customer #: 1000395

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**23 SUIS** Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 214

Affiliation: ESP Collect Date: 1/27/2010 12:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.24	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

**AB14446** Sample:

Customer #: 1000396

Facility ID:

(Multiple) County:

Collector: KEN HANNON

DUIS

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 214

Affiliation: ESP Collect Date: 1/27/2010 11:18:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.36	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.7	04	%	4,083	Infrared Drying

AB14447 Sample:

Customer #: 1000397

Facility ID:

(Multiple) County:

Collector: KEN HANNON

82 SUIS Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 215

Affiliation: ESP

Collect Date: 1/27/2010 11:10:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.73	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	4,083	Infrared Drying

Sample: **AB14448** Customer #: 1000398 Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 110 SUIS Site: Tannery Sludge Farm Fields

Sample Reference ID: 215

Affiliation: ESP

Collect Date: 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.05	04	<b>mg</b> /Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

Sample: AB14449

Customer #: 1000399

Facility ID:

(Multiple) County:

Collector: KEN HANNON

DUIS

**32 SUIS** 

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 215

Affiliation: ESP Collect Date: 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.73	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.6	04	%	4,083	Infrared Drying

AB14450 Sample:

Customer #: 1000400

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 216

Affiliation: ESP

Collect Date: 1/26/2010 3:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.14	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.7	04	%	4,083	Infrared Drying

Customer #: 1000401

Facility ID:

County: (Multiple)

Collector: KEN HANNON

**16 SUIS** 

50 SUIS

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 216

Affiliation: ESP

<b>Collect Date:</b>	1/26/2010	4:03:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.58	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

Sample: AB14453

**Customer #**: 1000403

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 22 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 217

Affiliation: ESP Collect Date: 1/26/2010 1:21:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.55	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%	4,083	Infrared Drying

Sample: AB14454

Customer #: 1000404

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 217

Affiliation: ESP Collect Date: 1/26/2010 11:47:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.82	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.5	04	%	4,083	Infrared Drying

Sample: AB14455

Customer #: 1000405

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: DUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 217

Affiliation: ESP Collect Date: 1/26/2010 12:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hex <b>avalent</b> Chromium	1.16	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	4,083	Infrared Drying

**Customer #:** 1000406

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 102 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 218

Affiliation: ESP

Collect Date: 1/26/2010 10:55:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.19	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.5	04	%	4,083	Infrared Drying

Sample: AB14457

Customer #: 1000407

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 87 SUIS

Site: Tannery Sludge Farm Fields Sample Reference ID: 218

Affiliation: ESP

Collect Date: 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.81	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

Sample: AB14459

Customer #: 1000409

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 219

Affiliation: ESP

Collect Date: 1/26/2010 12:55:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.04	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.0	04	%	4,083	Infrared Drying

Sample: AB14460

Customer #: 1000410

Facility ID: County:

(Multiple)

42 SUIS

15 SUIS

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 219

Affiliation: ESP Collect Date: 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.29	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%	4,083	Infrared Drying

Customer #: 1000412

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 164 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 221

Affiliation: ESP Collect Date: 1/25/2010 5:04:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.45	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	4,083	Infrared Drying

Sample: AB14463

Customer #: 1000413

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 109 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 221

Affiliation: ESP

Collect Date: 1/25/2010 5:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.49	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	4,083	Infrared Drying

Sample: AB14465

**Customer #:** 1000415

Facility ID:

County: (Multiple)

Collector: KEN HANNON

10 SUIS

Sample Comment:

Site: Tannery Sludge Farm Fields Sample Reference ID: 222

Affiliation: ESP

Collect Date: 1/25/2010 5:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	4,083	Infrared Drying

Sample: AB14466

Customer #: 1000416

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 27 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 222

Affiliation: ESP

Collect Date: 1/25/2010 5:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	4,083	Infrared Drying

Sample: **AB14468** Customer #: 1000418

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**19 SUIS** Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 224

Affiliation: ESP

Collect Date: 1/27/2010 9:40:00AM

QC Batch ID

3.996

4.083

Method

Contract Lab Dep

Infrared Drying

Test	Parameter	Result	Qualifier
Hexavalent Chromium	Hexavalent Chromium	0.17	04
Percent Moisture	Percent Moisture	0.5	04

(Multiple)

**23 SUIS** 

4 SUIS

Site: Tannery Sludge Farm Fields Sample Reference ID: 224

Affiliation: ESP Collect Date: 1/27/2010 9:00:00AM

Units

mg/Kg

%

Sample: AB14469 Customer #: 1000419

Collector: KEN HANNON Sample Comment:

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.30	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	4,083	Infrared Drying

AB14470 Sample:

Customer #: 1000420

Facility ID:

Facility ID:

County:

(Multiple) County:

Collector: KEN HANNON

**74 SUIS** Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 224

Affiliation: ESP Collect Date: 1/27/2010 9:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.87	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

Sample: AB14472

Customer #: 1000422

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 223

Affiliation: ESP Collect Date: 1/26/2010 12:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.23	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	4,083	Infrared Drying

**Customer #:** 1000423

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**28 SUIS** Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 223

Affiliation: ESP

Collect Date: 1/26/2010 12:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	4,083	Infrared Drying

AB14474 Sample:

Customer #: 1000424

Facility ID:

(Multiple) County:

Collector: KEN HANNON

Site: Tannery Sludge Farm Fields

Sample Reference ID: 223

Affiliation: ESP Collect Date: 1/26/2010 12:10:00PM

Sample Comment: DUIS

Sample container broken in transit to contract lab. Sample not analyzed.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Sample Cancelled	Sample Cancelled	N/A				NA

AB14475 Sample:

Customer #: 1000425

Facility ID:

(Multiple) County:

Collector: KEN HANNON

60 SUIS Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 225

Affiliation: ESP Collect Date: 1/26/2010 10:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	4,083	Infrared Drying

Sample: AB14476

**Customer #**: 1000426

Facility ID:

(Multiple) County:

Collector: KEN HANNON

8 SUIS

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 225

Affiliation: ESP

Collect Date: 1/26/2010 11:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	4,083	Infrared Drying

Customer #: 1000427

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** DUIS Site: Tannery Sludge Farm Fields

Sample Reference ID: 225

Affiliation: ESP

Collect Date: 1/26/2010 10:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.48	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%	4,083	Infrared Drying

AB14478 Sample:

Customer #: 1000429

Facility ID:

County: (Multiple)

Collector: KEN HANNON

44 SUIS **Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 223

Affiliation: ESP

Collect Date: 1/26/2010 1:22:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Alurninum	23500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	287000 <b>00</b>	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	854000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	986		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	51300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.47	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	415		mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.82		%	3,422	Infrared Drying
pH	рН	7.42		pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.9		%	3,993	Contract Lab Dep

Sample:

AB14479

Customer #: 1000430

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**32 SUIS** 

**Sample Comment:** 

Site: Tannery Sludge Farm Fields Sample Reference ID: 225

Affiliation: ESP

Collect Date: 1/26/2010 10:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	108000 <b>00</b>	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	14600000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	433000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	409	05	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31000		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.36	04	mg/Kg	3,996	Contract Lab Dep

Customer #: 1000430

(1- Boldt

Chris Boldt, Laboratory Manager

**Environmental Services Program** 

**Field Services Division** 

Facility ID:

(Multiple) County:

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 225

Affiliation: ESP

Collect Date: 1/26/2010 10:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Oxidation Reduction Potential	Oxidation Reduction Potential	397		mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.61		%	3,422	Infrared Drying
рН	рН	7.66		pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	1.3		%	3,993	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

#### **Qualifier Descriptions**

- 01 Improper collection method
- 03 Exceeded holding time

**32 SUIS** 

- 05 Estimated value, detected below PQL
- 07 Estimated value, analyte outside calibration range
- 09 Sample was diluted during analysis
- 11 Estimated value, matrix interference
- 13 Estimated value, true result is >= reported value
- 15 No Result Failed Quality Controls Requirements
- 17 Results in dry weight
- 19 Estimated value
- 21 No result spectral interference
- 23 Contract Lab specific qualifier see sample comments
- ND Not detected at reported value

- 02 Improper preservation
- 04 Analyzed by Contract Laboratory
- 06 Estimated value, QC data outside limits
- 08 Analyte present in blank at > 1/2 reported value
- 10 Laboratory error
- 12 Insufficient quantity
- 14 Estimated value, non-homogeneous sample
- 16 Not analyzed related analyte not detected
- 18 Sample pH is outside the acceptable range
- 20 Not analyzed Instrument failure
- 22 pH was performed at the Laboratory
- 24 No result matrix interference



### Missouri Department of Natural Resources **Environmental Services Program**



Order ID

100203001

Program, Contact: HWP

Julieann Warren

Report Date:

02/19/2010

LDPR/JobCode:

FEPA8 / NJ10TSFF



Sample:

AB14350

Customer #: 1000361

Facility ID: County:

Collector: PAM HACKLER

Sample Comment:

(Multiple)

Site: Tannery Sludge Farm Fields

Sample Reference ID: 218

Affiliation: ESP

Collect Date: 1/26/2010 10:57:00AM

Test **Parameter** Result Qualifier Units QC Batch ID Method Hexavalent Chromium Hexavalent Chromium 1.71 04 mg/Kg Contract Lab Dep 0.7 04 % Percent Moisture Percent Moisture Infrared Drying

SU 102.02. Expedited 48 hour turnaround.

Sample:

AB14351

Customer #:

Facility ID: County:

(Multiple)

Collector: PAM HACKLER

Site: Tannery Sludge Farm Fields Sample Reference ID: 218

Affiliation: ESP

Collect Date: 1/26/2010 9:46:00AM

Sample Comment:

SU 87.04. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID Method
Hexavalent Chromium	Hexavalent Chromium	1.00	04	mg/Kg	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	Infrared Drying

Sample:

AB14352

**Customer #:** 1000363

Facility ID: County:

(Multiple)

Collector: PAM HACKLER

Sample Reference ID: 202

Affiliation: ESP

Site: Tannery Sludge Farm Fields

Collect Date: 1/26/2010 12:00:00PM

Sample Comment:

SU 59.09. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID Method
Hexavalent Chromium	Hexavalent Chromium	1.76	04	mg/Kg	Contract Lab Dep
Percent Moisture	Percent Moisture	2.7	04	%	Infrared Drying

Customer #: 1000364

Facility ID: County:

(Multiple)

(Multiple)

Sample Reference ID: 202

Collector: PAM HACKLER

Affiliation: ESP

Collect Date: 1/26/2010 11:50:00AM

Sample Comment:

SU 59.07. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID Method
Hexavalent Chromium	Hexavalent Chromium	4.88	04	mg/ <b>Kg</b>	Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%	Infrared Drying

AB14354 Sample:

Facility ID: County:

Site: Tannery Sludge Farm Fields

Site: Tannery Sludge Farm Fields

Sample Reference ID: 202

Collector: PAM HACKLER Affiliation: ESP

SU 79.03. Expedited 48 hour turnaround. Sample Comment:

Test	Parameter	Result	Qualifier	Units	QC Batch ID Method
Hexavalent Chromium	Hexavalent Chromium	2.08	04	mg/Kg	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	Infrared Drying

Sample: AB14355

**Customer #**: 1000366

Facility ID: County:

Sample Comment:

(Multiple)

Collector: PAM HACKLER

Affiliation: ESP SU 146.08. Expedited 48 hour turnaround.

Site:	Tannery Sludge Farm Fields	
Samp	le Reference ID: 218	

Collect Date: 1/26/2010 1:30:00PM

Collect Date: 1/26/2010 1:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.59	04	mg/ <b>Kg</b>		Contract Lab Dep
Percent Moisture	Percent Moisture	12.5	04	%		Infrared Drying

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

### **Qualifier Descriptions**

- 01 Improper collection method
- 03 Exceeded holding time
- 05 Estimated value, detected below PQL
- 07 Estimated value, analyte outside calibration range
- 09 Sample was diluted during analysis
- 11 Estimated value, matrix interference
- 13 Estimated value, true result is >= reported value
- 15 No Result Failed Quality Controls Requirements
- 17 Results in dry weight
- 19 Estimated value
- 21 No result spectral interference
- ND Not detected at reported value

- 02 Improper preservation
- 04 Analyzed by Contract Laboratory
- 06 Estimated value, QC data outside limits
- 08 Analyte present in blank at > 1/2 reported value
- 10 Laboratory error
- 12 Insufficient quantity
- 14 Estimated value, non-homogeneous sample
- 16 Not analyzed related analyte not detected
- 18 Sample pH is outside the acceptable range
- 20 Not analyzed Instrument failure
- 22 pH was performed at the Laboratory
- 23 Contract Lab specific qualifier see sample comments

Chris Boldt, Laboratory Manager **Environmental Services Program** Field Services Division

The Boldt



### Missouri Department of Natural Resources **Environmental Services Program**

Order ID

100202002

Program, Contact:

**HWP** 

Julieann Warren

**Report Date:** 

03/09/2010

LDPR/JobCode:

FEPA8 / NJ10TSFF



AB14289 Sample:

(Multiple) County: Collector: SEAN COUNIHAN Site: Tannery Sludge Farm Fields

Sample Reference ID: 319

Affiliation: ESP

Collect Date: 1/27/2010 2:35:00PM

Customer #: 1000300

Y1. Run lab Dup on this sample. Sample Comment:

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	< 0.014	ND, 04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	2.6	04	%	3,946	Infrared Drying

Sample: AB14290

Customer #: 1000301

Facility ID:

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 319

Affiliation: ESP

Collect Date: 1/27/2010 2:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.022	04, 05	<b>mg/</b> Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	3,946	Infrared Drying

AB14291 Sample:

**Customer #:** 1000302

Facility ID: County:

(Multiple)

Collector: SEAN COUNIHAN

**Y**3

Y2

**Sample Comment:** 

Site: Tannery Sludge Farm Fields Sample Reference ID: 319

Affiliation: ESP

Collect Date: 1/27/2010 2:49:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.019	04, 05	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	4.0	04	%	3,946	Infrared Drying

Customer #: 1000303

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 319

Affiliation: ESP

Collect Date: 1/27/2010 2:57:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	11.6	04	%	3,946	Infrared Drying

Sample: AB14293

Customer #: 1000304

Facility ID: County:

(Multiple)

**Y4** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 319

Collector: SEAN COUNIHAN

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

Sample Comment:

DUIS. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	< 0.014	ND, 04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	3.7	04	%	3,946	Infrared Drying

AB14294 Sample:

Customer #: 1000305

Facility ID: County:

(Multiple)

Collector: SEAN COUNIHAN

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 305

Affiliation: ESP

Collect Date: 1/27/2010 10:26:00AM

**Parameter** Result Qualifier Units QC Batch ID Method Test 0.063 04 3.936 Hexavalent Chromium Hexavalent Chromium mg/Kg Contract Lab Dep 04 Percent Moisture Percent Moisture 0.6 % 3.946 Infrared Drying

AB14295 Sample:

Customer #: 1000306

Facility ID:

County:

(Multiple)

Collector: SEAN COUNIHAN

Site: Tannery Sludge Farm Fields Sample Reference ID: 305

Affiliation: ESP

Collect Date: 1/27/2010 10:37:00AM

Y2 Sample Comment:

**Y**1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.16	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	3,946	Infrared Drying

Sample:

AB14296

Customer #: 1000307

Facility ID:

Facility ID:

County:

(Multiple) County:

Collector: SEAN COUNIHAN

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 305

Affiliation: ESP

Result

Collect Date: 1/27/2010 10:46:00AM

QC Batch ID

3.936

3,946

Method

Contract Lab Dep

Infrared Drying

Method

Contract Lab Dep

Infrared Drying

Method

Test	
Hexavalent Chromium	
Percent Moisture	

**Parameter** Hexavalent Chromium Percent Moisture

(Multiple)

0.061 04 mg/Kg % 0.4 04

Qualifier

Qualifier

Qualifier

04

04

Site: Tannery Sludge Farm Fields Sample Reference ID: 305

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

QC Batch ID

3.936

3,946

QC Batch ID

Sample: AB14297 Customer #: 1000308

**Sample Comment:** 

Collector: SEAN COUNIHAN

DUIS

**Y**3

Test	
Hexavalent Chromium	l
Percent Moisture	

AB14298

Parameter	Result
Hexavalent Chromium	0.066
Percent Moisture	0.3
	Hexavalent Chromium

Site: Tannery Sludge Farm Fields Facility ID:

(Multiple) County: Collector: SEAN COUNIHAN

Sample Comment:

Sample Reference ID: 320 Affiliation: ESP

Collect Date: 1/26/2010 11:50:00AM

Units

Units

mg/Kg

%

Customer #: 1000309

Hexavalent Chromium Percent Moisture

Sample:

Test

Parameter	
Hexavalent Chromium	
Percent Moisture	

0.32	04	mg/Kg	3,936	Contract Lab Dep
2.3	04	%	3,946	Infrared Drying

Units

AB14299 Sample:

Facility ID: County:

(Multiple)

Site: Tannery Sludge Farm Fields

Sample Reference ID: 320

Collector: SEAN COUNIHAN

Affiliation: ESP

Result

Collect Date: 1/26/2010 12:02:00PM

Customer #: 1000310

**Y**2 Sample Comment:

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.035	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	3,947	Infrared Drying

Customer #: 1000311

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

**Y3** 

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 320

Affiliation: ESP

Collect Date: 1/26/2010 11:22:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.025	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	3,947	Infrared Drying

AB14301 Sample:

Customer #: 1000312

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 320

Affiliation: ESP

Collect Date: 1/26/2010 11:34:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.29	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	0.8	04	%	3,947	Infrared Drying

Sample: AB14302

Customer #: 1000313

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

DUIS Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 320

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00AM

Qualifier Test **Parameter** Result Units QC Batch ID Method Hexavalent Chromium Hexavalent Chromium 0.11 04 mg/Kg 3.937 Contract Lab Dep 04 Percent Moisture Percent Moisture 1.4 % 3.947 Infrared Drying

Sample: AB14303

**Customer #:** 1000314

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

**Y**1

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 9:30:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.8	04	%	3,947	Infrared Drying

Customer #: 1000315

Facility ID:

(Multiple) County:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 325

Affiliation: ESP

Collector: SEAN COUNIHAN

Collect Date: 1/26/2010 9:10:00AM

**Sample Comment:** 

Y2. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.053	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.5	04	%	3,947	Infrared Drying

AB14305 Sample:

Customer #: 1000316

Facility ID: County:

**Sample Comment:** 

(Multiple) Collector: PAM HACKLER

**Y3** 

Site: Tannery Sludge Farm Fields Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	6.3	04	%	3,947	Infrared Drying

Sample:

**Customer #**: 1000317

AB14306

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

Sample Comment:

Site: Tannery Sludge Farm Fields Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 9:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.052	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,947	Infrared Drying

**AB14307** Sample:

Customer #: 1000318

Facility ID: County:

(Multiple)

DUIS

Collector: PAM HACKLER

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.068	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,947	Infrared Drying

**Customer #:** 1000319

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 326

Affiliation: ESP

Collect Date: 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	3.4	04	%	3,947	Infrared Drying

AB14309 Sample:

Customer #: 1000320

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 326

Affiliation: ESP

Collect Date: 1/26/2010 9:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.098	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%	3,948	Infrared Drying

Sample: **AB14310** 

Customer #: 1000321

Facility ID: County:

(Multiple)

Collector: PAM HACKLER

**Y2** 

Site: Tannery Sludge Farm Fields Sample Reference ID: 326

Affiliation: ESP

Collect Date: 1/26/2010 10:00:00AM

**Sample Comment:** 

Y3. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.21	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	3,948	Infrared Drying

AB14311 Sample:

Customer #: 1000322

Facility ID: County:

(Multiple)

Collector: PAM HACKLER

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 326

Affiliation: ESP

Collect Date: 1/26/2010 10:10:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	6.1	04	%	3,948	Infrared Drying

AB14312 Sample:

Customer #: 1000323

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

DUIS

Sample Comment:

Sample Reference ID: 326

Site: Tannery Sludge Farm Fields

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.22	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.6	04	%	3,948	Infrared Drying

AB14313 Sample:

Customer #: 1000324

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

Sample Comment: Y1 Site: Tannery Sludge Farm Fields

Sample Reference ID: 312

Affiliation: ESP

Collect Date: 1/27/2010 8:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.081	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	1.9	04	%	3,948	Infrared Drying

Sample: AB14314

Customer #: 1000325

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 312

Affiliation: ESP Collect Date: 1/27/2010 8:35:00AM

Result Qualifier Units QC Batch ID Method Test **Parameter** 0.094 04 3.938 Contract Lab Dep mg/Kg Hexavalent Chromium Hexavalent Chromium Percent Moisture 2.1 04 % 3,948 Infrared Drying Percent Moisture

AB14315 Sample:

Customer #: 1000326

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

**Y3** 

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 312

Affiliation: ESP

Collect Date: 1/27/2010 8:50:00AM

**Parameter** Result Qualifier Units QC Batch ID Method Test Contract Lab Dep Hexavalent Chromium 0.086 04 mg/Kg 3.938 Hexavalent Chromium Percent Moisture 5.4 04 % 3,948 Infrared Drying Percent Moisture

**Customer #:** 1000327

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

**Sample Comment:** 

DUIS

**Y**1

Site: Tannery Sludge Farm Fields

Sample Reference ID: 312

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.078	04	mg/ <b>K</b> g	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	2.9	04	%	3,948	Infrared Drying

**AB14317** Sample:

**Customer #**: 1000328

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 313

Affiliation: ESP

Collect Date: 1/26/2010 3:25:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.48	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	5.1	04	%	3,948	Infrared Drying

**AB14318** Sample:

Customer #: 1000329

Facility ID: County:

(Multiple)

Collector: PAM HACKLER

Affiliation: ESP

Site: Tannery Sludge Farm Fields Sample Reference ID: 313

Collect Date: 1/26/2010 3:30:00PM

Sample Comment: Y2. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.3	04	%	3,948	Infrared Drying

Sample: AB14319

**Customer #:** 1000330

Facility ID:

County:

(Multiple)

Collector: PAM HACKLER

**Sample Comment:** 

Affiliation: ESP

Site: Tannery Sludge Farm Fields Sample Reference ID: 313

Collect Date: 1/26/2010 3:35:00PM

Qualifier Units QC Batch ID **Parameter** Result Method Test Hexavalent Chromium 0.76 04 mg/Kg 3,939 Contract Lab Dep Hexavalent Chromium 3.9 04 % Percent Moisture 3.949 Infrared Drying Percent Moisture

**Customer #:** 1000331

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment:

Affiliation: ESP

\_\_\_\_

Collect Date: 1/26/2010 3:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.20	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	5.8	04	%	3,949	Infrared Drying

Sample: AB14321

Customer #: 1000333

Facility ID: County:

(Multiple)

Collector: SEAN COUNIHAN

Site: Tannery Sludge Farm Fields

Site: Tannery Sludge Farm Fields

Sample Reference ID: 313

Sample Reference ID: 313

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00AM

Sample Comment: DUIS. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.18	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	4.4	04	%	3,949	Infrared Drying

Sample: AB14322

Customer #: 1000334

Facility ID:

County: (Multiple)

Collector: SEAN COUNIHAN

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 301

Affiliation: ESP Collect Date: 1/27/2010 2:35:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.059	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	3,949	Infrared Drying

Sample: AB14323

Customer #: 1000335

Facility ID: County:

(Multiple)

Collector: SEAN COUNIHAN

Y2

Collector: SEAN COUNIHA

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 301

Affiliation: ESP Collect Date: 1/27/2010 2:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	10.3	04	%	3,949	Infrared Drying

**Customer #:** 1000336

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

**Sample Comment:** 

**Y**3

Site: Tannery Sludge Farm Fields

Sample Reference ID: 301

Affiliation: ESP

Collect Date: 1/27/2010 2:49:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.076	04	mg/K.g	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	6.8	04	%	3,949	Infrared Drying

**AB14325** Sample:

Customer #: 1000337

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

**Sample Comment: Y4**  Site: Tannery Sludge Farm Fields

Sample Reference ID: 301

Affiliation: ESP

Collect Date: 1/27/2010 2:57:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.076	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	6.5	04	%	3,949	Infrared Drying

AB14326 Sample:

Customer #: 1000338

Facility ID: County:

(Multiple)

Collector: SEAN COUNIHAN

Site: Tannery Sludge Farm Fields

Sample Reference ID: 301

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

DUIS. Run lab Dup on this sample. Sample Comment:

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.071	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	5.7	04	%	3,949	Infrared Drying

Sample: **AB14327** 

Customer #: 1000339

Facility ID:

County:

(Multiple)

Collector: SEAN COUNIHAN

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP Collect Date: 1/27/2010 2:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.057	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	2.0	04	%	3,949	Infrared Drying

**AB14328** Sample:

Customer #: 1000340

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

Sample Comment:

Y1, duplicate #1

Y1, duplicate #2

Y2

**Y**3

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:34:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.054	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	3,949	Infrared Drying

AB14329 Sample:

Customer #: 1000341

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:38:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	3,950	Infrared Drying

Sample: AB14330

Customer #: 1000342

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.061	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	3,950	Infrared Drying

Sample: AB14331

Customer #: 1000343

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:50:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.16	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	3,950	Infrared Drying

Customer #: 1000344

Facility ID:

(Multiple) County:

Collector: KEN HANNON

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 3:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	6.6	04	%	3,950	Infrared Drying

Sample: **AB14333** 

Customer #: 1000345

Facility ID: County:

(Multiple)

Collector: KEN HANNON

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

**Sample Comment:** 

DUIS. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.087	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	2.4	04	%	3,950	Infrared Drying

Sample: AB14334

Customer #: 1000346

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 303

Affiliation: ESP

Collect Date: 1/27/2010 3:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.049	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,950	Infrared Drying

Sample: AB14335

Customer #: 1000347

Facility ID:

County:

(Multiple)

Collector: KEN HANNON

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 303

Affiliation: ESP

Collect Date: 1/27/2010 3:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.042	04	m <b>g/K</b> .g	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.4	04	%	3,950	Infrared Drying

AB14336 Sample:

Customer #: 1000348

Facility ID:

(Multiple) County:

Collector: KEN HANNON

**Sample Comment:** 

Sample Reference ID: 303

Site: Tannery Sludge Farm Fields

Affiliation: ESP

Collect Date: 1/27/2010 3:20:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.058	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,950	Infrared Drying

AB14337 Sample:

Customer #: 1000349

Facility ID:

County:

(Multiple)

Collector: PAM HACKLER

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 303

Affiliation: ESP

Collect Date: 1/27/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.036	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	2.9	04	%	3,950	Infrared Drying

Sample: AB14338

Customer #: 1000350

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

DUIS

**Y**1

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 303

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.054	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.9	04	%	3,950	Infrared Drying

Sample: AB14339

Customer #: 1000351

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 306

Affiliation: ESP

Collect Date: 1/27/2010 12:54:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.14	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	3,951	Infrared Drying

Customer #: 1000352

Facility ID:

(Multiple) County:

Collector: PAM HACKLER

Y2

**Y3** 

DUIS

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 306

Affiliation: ESP

Collect Date: 1/27/2010 1:02:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.21	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	3,951	Infrared Drying

Sample: AB14341

Customer #: 1000353

Facility ID:

County:

(Multiple)

Collector: SEAN COUNIHAN

**Sample Comment:** 

Site: Tannery Sludge Farm Fields

Sample Reference ID: 306

Affiliation: ESP

Collect Date: 1/27/2010 1:10:00PM

Test **Parameter** Result Qualifier Units QC Batch ID Method Hexavalent Chromium Hexavalent Chromium 0.22 04 3.941 mg/Kg Contract Lab Dep 5.8 04 Percent Moisture Percent Moisture % 3,951 Infrared Drying

Sample: AB14342

Customer #: 1000354

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 306

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

**Parameter** Qualifier Test Result Units QC Batch ID Method Hexavalent Chromium 0.19 Hexavalent Chromium 04 mg/Kg 3,941 Contract Lab Dep 04 Percent Moisture Percent Moisture 2.5 % 3,951 Infrared Drying

AB14343 Sample:

Customer #: 1000355

Facility ID:

County:

(Multiple)

Collector: SEAN COUNIHAN

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 302

Affiliation: ESP

Collect Date: 1/26/2010 4:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.098	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.6	04	%	3,951	Infrared Drying

Sample:

AB14344

AB14345

**Customer #:** 1000356

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

Y2 Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 302

Affiliation: ESP

Collect Date: 1/26/2010 4:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	6.0	04	%	3,951	Infrared Drying

Sample:

Customer #: 1000357

Facility ID: County:

(Multiple) Collector: SEAN COUNIHAN

Site: Tannery Sludge Farm Fields

Sample Reference ID: 302

Affiliation: ESP

Collect Date: 1/26/2010 4:25:00PM

Y3. Run lab Dup on this sample. Sample Comment:

Y3, duplicate #2

Y3, duplicate #2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.10	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	3,951	Infrared Drying

Sample:

AB14346

Customer #: 1000358

Facility ID:

County: (Multiple)

Collector: SEAN COUNIHAN

Sample Comment:

Site: Tannery Sludge Farm Fields Sample Reference ID: 302

Affiliation: ESP

Collect Date: 1/26/2010 4:47:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.057	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	3,951	Infrared Drying

Sample:

Customer #: 1000359

AB14347

Facility ID: County:

(Multiple)

Collector: SEAN COUNIHAN

Sample Comment:

Site: Tannery Sludge Farm Fields

Sample Reference ID: 302

Affiliation: ESP

Collect Date: 1/26/2010 4:50:00PM

QC Batch ID **Parameter** Result Qualifier Method Test Units Hexavalent Chromium 0.093 Hexavalent Chromium 04 mg/Kg 3,941 Contract Lab Dep 2.2 04 % 3,951 Percent Moisture Percent Moisture Infrared Drying

Sample:

**AB14348** 

( ) Beldt

Chris Boldt, Laboratory Manager

**Environmental Services Program** 

**Field Services Division** 

Customer #: 1000360

Facility ID:

(Multiple) County:

Collector: SEAN COUNIHAN

Sample Comment:

DUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 302

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	3,951	Infrared Drying

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

## **Qualifier Descriptions**

- 01 Improper collection method
- 03 Exceeded holding time
- 05 Estimated value, detected below PQL
- 07 Estimated value, analyte outside calibration range
- 09 Sample was diluted during analysis
- 11 Estimated value, matrix interference
- 13 Estimated value, true result is >= reported value
- 15 No Result Failed Quality Controls Requirements
- 17 Results in dry weight
- 19 Estimated value
- 21 No result spectral interference
- ND Not detected at reported value

- 02 Improper preservation
- 04 Analyzed by Contract Laboratory
- 06 Estimated value, QC data outside limits
- 08 Analyte present in blank at > 1/2 reported value
- 10 Laboratory error
- 12 Insufficient quantity
- 14 Estimated value, non-homogeneous sample
- 16 Not analyzed related analyte not detected
- 18 Sample pH is outside the acceptable range
- 20 Not analyzed Instrument failure
- 22 pH was performed at the Laboratory
- 23 Contract Lab specific qualifier see sample comments



## Addendum

## Missouri Department of Natural Resources **Environmental Services Program**

Addendum

Reason: Field results added per Michael Stroh

Order ID 100129004

Julieann Warren Program, Contact: HWP

**Report Date:** 

02/17/2010

LDPR/JobCode:

FEPA8 / NJ10TSFF





Sample: AB14142

The Bildt

Chris Boldt, Laboratory Manager

**Environmental Services Program** 

**Field Services Division** 

Facility ID: County:

Buchanan

Site: Tannery Sludge Farm Fields Sample Reference ID: Parcel 3383

Collector: SEAN COUNIHAN

Affiliation: ESP

Collect Date: 1/26/2010 4:27:00PM

**Sample Comment:** 

Sample from well head Loc. 102. Applied Speciation bottle #B02367.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Field pH	Field pH	6.82		pH Units		EPA 150.1
Field Specific Conductivity	Field Specific Conductivity	483 uS/cm				SM 2510
Field Temperature	Field Temperature	12.7 C	<del></del>			EPA 170.1
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.269	04	ug/ <b>L</b>	3,234	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

## Qualifier Descriptions

- 01 Improper collection method
- 03 Exceeded holding time
- 05 Estimated value, detected below PQL
- 07 Estimated value, analyte outside calibration range
- 09 Sample was diluted during analysis
- 11 Estimated value, matrix interference
- 13 Estimated value, true result is >= reported value
- 15 No Result Failed Quality Controls Requirements
- 17 Results in dry weight
- 19 Estimated value
- 21 No result spectral interference
- ND Not detected at reported value

- 02 Improper preservation
- 04 Analyzed by Contract Laboratory
- 06 Estimated value, QC data outside limits
- 08 Analyte present in blank at > 1/2 reported value
- 10 Laboratory error
- 12 Insufficient quantity
- 14 Estimated value, non-homogeneous sample
- 16 Not analyzed related analyte not detected
- 18 Sample pH is outside the acceptable range
- 20 Not analyzed Instrument failure
- 22 pH was performed at the Laboratory
- 23 Contract Lab specific qualifier see sample comments



# Missouri Department of Natural Resources

**Environmental Services Program** 

Order ID

100129004

Program, Contact: HWP

Julieann Warren

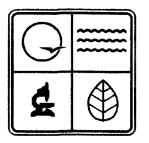
**Report Date:** 

02/17/2010

LDPR/JobCode:

FEPA8 / NJ10TSFF





Sample: **AB14142** 

Customer #: 1000501

Facility ID: County:

Buchanan

Collector: SEAN COUNIHAN

Site: Tannery Sludge Farm Fields Sample Reference ID: Parcel 3383

Affiliation: ESP

Collect Date: 1/26/2010 4:27:00PM

Sample Comment:

Sample from well head Loc. 102. Applied Speciation bottle #B02367.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.269	04	ug/L	3,234	Contract Lab Dep

Sample: **AB14143** 

**Customer #:** 1000502

Facility ID: County:

Buchanan

Site: Tannery Sludge Farm Fields Sample Reference ID: Parcel 3383

Collector: SEAN COUNIHAN

Affiliation: ESP

**Collect Date:** 

1/26/2010 4:35:00PM

**Sample Comment:** 

Field blank. Applied Speciation bottle #B02363.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	<0.022	ND, 04	ug/L	3,234	Contract Lab Dep

Sample:

**AB14144** 

Customer #: 1000503

Facility ID: County:

Buchanan

Collector: SEAN COUNIHAN

Site: Tannery Sludge Farm Fields Sample Reference ID: Parcel 3383

Affiliation: ESP

**Collect Date:** 

1/26/2010 12:00:00AM

**Sample Comment:** 

Duplicate. Applied Speciation bottle #B02391.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.263	04	ug/L	3,234	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

Mi Boldt

Chris Boldt, Laboratory Manager Environmental Services Program Field Services Division

#### **Qualifier Descriptions**

- 01 Improper collection method
- 03 Exceeded holding time
- 05 Estimated value, detected below PQL
- 07 Estimated value, analyte outside calibration range
- 09 Sample was diluted during analysis11 Estimated value, matrix interference
- 13 Estimated value, true result is >= reported value
- 15 No Result Failed Quality Controls Requirements
- 17 Results in dry weight
- 19 Estimated value
- 21 No result spectral interference
- ND Not detected at reported value

- 02 Improper preservation
- 04 Analyzed by Contract Laboratory
- 06 Estimated value, QC data outside limits
- 08 Analyte present in blank at > 1/2 reported value
- 10 Laboratory error
- 12 Insufficient quantity
- 14 Estimated value, non-homogeneous sample
- 16 Not analyzed related analyte not detected
- 18 Sample pH is outside the acceptable range
- 20 Not analyzed Instrument failure
- 22 pH was performed at the Laboratory
- 23 Contract Lab specific qualifier see sample comments

## APPENDIX B

## **Field Notes**

Tannery Sludge Farm Fields Site Andrew, Buchanan, Clinton and DeKalb Counties, MO

Jannery She by Fam Fe 1 S. Hilly belatill land 160F Wint Ole 1 Val Wilder high Flurrius 17:04 Parcel 4480 LOC 18 22 | - All terrord land 54 164 Sloping + low lying areas High Varishing 17:35 Paul 4482 (86.10 201 SU. 150 Picked for uniformity 1730 June 4482 (cc. 10 201 Picked Becare filled of in Drange Swant. took pictures 4 total. 1/26/10 Tommy Shing Form Fields 0944 21° Vind Chill 90 @ 10+15mph puth cloudy. Paircel 18970 Residential Val YI @ 1001, 42@ 1013 43 @ 1010 44 1025

Joseph 18970 Locale the come was where shady was sited before gooding. British sand they were very good a evenly fortunding shade - come tild

Partel 18970 Loc 10219
SU 55 Was chosen because it is a

Flort even that is at bottom of two slopes
Started @ 1220 Sighim Fild

SU 47 chosen because continuly flood w/ 1 the

Parcel 3833 (ac is 20) Su 79 Started & 1415 Swig was damped Northus plat.

126/10 Tinney Sly ly Form Field Parcel # 383300 Lot , d 200 Su. 59 C1318 Chasm for High Variability Sloved tomas & is long in fine Parcel 3383 Paral H 3833 Loi. 202 50 29 C 1541 Chosen because for variability sun, formity Parcely 3383 Loc 200 100 Grand water Samples PA weter @ 70H and 7.04 @ 4pH rends 4,1 Concentraty @ 14/34s reads 14204s ORP Met, @ ZOOMV reads 226 Hydrat on @ 1620 fist massement a 1433 Temp 11.30C pH = 785mc 6.80 Cond 504ms ORP = 192 mV Second measurement @ 1676 Temp 17.7°C ORP 177 mV DH 1 87 Cmd. 483

Suple taken @ 1627 Somple # 1000501 Aprily Sprintin Bottle # BO2367 Field Black taken 1635 Suple # 1000 502 Applied speciation Dottle # 13 02363 Duplicate taken sage # 1000 503 April Jacintion bittle # 500591 1/37/10 Tanny Studge form Find ds Pariel 6633 (a 1d 305 Registerted yel Y10 1034 430 1037 450 1046 Paral W37 (011) 205 Su 71 picked because highly Veriable, where Studge was dumped.

Percel 4432 Loc 10 205

fill, on Slight Slight

State @ 1100

JU 34 chosen for low variability sold com

Parcel 6/32 Local 205
Su 96 choson because pasture lad
un form Variability.
Started @ 12/0

Parcel unknown at this time
Daughters Residence of 6432 11444 Sterte E.

15 Downwind from Where Hymry mo
Sludge was Stock piled a also Applied to been
Pield - (behind house).

On property of 6432 a were granted
Permission

(or 10 306

y1 @ 1310

y2 @ 1302

Porcel 3627 LOC (D 301

Restential year only

Form 15 a backgrand not needed at this fine:

y1 @ 1455 y2@ 1440 y3@ 1449

44 @ 1457

Jan 25 2010 Pam Hackler, Shelly Jackson Ben Frissell, Michael, Paul

Loc ID 209 = Du

Par (el ID 0949

Grid 138 = Su half com, 1/2 fallow
Pasture

Val, Hillary, Paul
no, turns, uniform, slight slope
red sty material
109 su
michael, pam, shelly
10w area in cornfield
10ts of organic matter

camera ×15 # B3

Su B8 photo 1 = Bags

photo 27

photo 3 - Cernfield soil

4 - pasture Soil

Loc 10 222 Pam, Ken, Ben parcel 4482 1658 hours

SU 41 Low level, terraced

Su 10 Tree, turn around point, low level

Su 27 high ground, least variable

1-26-2010 Parcel 4859 LOC ID 225 Field 325 yard \$ 326

SU 32 Pam, Ben, Shelly Split between com and boan fields SU 60 turning point in corner of field

SU 8 Homogenous, all in corn

Parcel 1676 LOC ID 223

Su 44 - As renumbered Northwest east corner Very variable, corn, hay, fallow, edge trees

Su 28 mostly homogenous 1 com

SU 4 Low land, corn, drainage

Parcel 6488 Loc ID Yard 313, Field 213

SU 9 1600 h, terraced, fairly homogenous, although close to reported storage area

SU 15 gently sloping, hay/pasture homogenous

Varied, hay pasture and row crop and turn in row crop field.

Pam, Ben, Shelly

Parcel 5180 Loc ID 312 - Residence 6800 h Parcel 5180 LOC 212

> SV 53 Terraced, Poy field (or fallow) 0910 h Sludge accumulates

SU 16 hilly, hay field, dirt road bisects 0945

86 SU nilltop, homogenous 1015 h

Parcel 8940 LOC 214

Su 53 heterogeneous, half of plot had Studge applied, 1/2 did not SU 23 Sloping, homogenous not terraced

SU 37 25 Low drainage area, sludge applied

Parcel 2191 LOC ID 303 Yard

Corner of field, turns

Not row crop

edge of tree

pext to corner of fence row

Cone over

Print tonning Form Fields Date: 1/26/10 FEPAB/NJIDTSFF 20 clear
FEPABINJIUTSFF
PERABINJIUTSFF 20 clear Brezy
Parce : 21671
Loc: 218
su: B7
suchosen due to suy Branfield, lowlying
acro next to Raxid
Su: 146
S& chosen due to pasture, uinform upland
postion
Su: 102
Su chosen due to include buffered acch
Su chosen due to include buffered area in low and upland area, con pasture
Parcel 1671: Loc ID: 217
SU50: chosen as uniform upland, pasture
acescu
grassy
SU 87: Chasen as he teregoneous due to nearly fuffered creeks as low lying areas and uplands. Hervily used by cows
nough Luffered creeks as lowlying creas
and uslands. Hervily used by cows
a. a. I may a superior

Parcel 1671
LOCID 218
Su: 1022 Chosen due to both uplants
and law areas + because it is
adjacent to a resid on trail yard.

Parce 1:2247 LOCID:216 Su# 16: upland soybean field uniform

Sutt 32: adjacent to gate that I coks most likely to be where slydge was brought in. Soybean field

Suff 50 ! Near field boundary rept to treetine in d. puffered area, non-suffeed upland and low areas postureland

Gtopped for DAY

1-27-10 Prime Tanning Farmfields
25° cloudy, slightwind
Parcel 2241
Loc ID 224
Su 23; Uniform upland in middle

of field. Cornlsoy

Su74: 11-shaped turnaround near tree line and small pond. Incl. buffered area. Corn/Soy

SU 19: Area adjoint to road incl. the main gate where sludge was likely to have been brought in cameron B5 exptt 7, 8

Parce 1 2517
Loc ID 215
SUITO Arean adj. to road incl.
access gate. Visible signs of strage
near gate @ surface. Pasture
Course 85 exp #9,10
Su 82: unform area in modile of
Field. Pasture dense grass, Visible layer
of studge ~ 1/2" down - reddish.

Tannery S	ludge Fo	an Field	+ (cond.)
,		1-2	7-10

larce 2517

Loc JD 215

SU: 55 Area near treeline and lake 1000 elevation. Turnaround ava. Usible sluige layer in a portion of SU, but not in buffered area. Camera BS exp.#11

Parcel 2517 Loc ID 204 Su. 99 Owner indicate

Su: 99 Owner indicated this was an area whose Studge was stockpiled. Wear barn and gate, just SE of house.

SU: 42 Upland Uniform anaa on slight N. slope. Dense grass posture.

SU: 23 Area near treeline gate and hay Round storage. Probably incl. buffered + non-buffered por trons.

(amon 185 exp.# 12-17

Parcel 2517
Loc. ID 304 Res. YARD

4 yard vnits. Collected triplicate
IS in YI

Camera BS exp. #18

MS

END OF DAM

1-27-10 (cont)

Parcel 2517 ns
Loc ID 30 203
SU18: Uniform east sloping posture
no visible sludge, suabuts edge of
small pond.

END



March 8, 2010

Michael Stroh Missouri Department of Natural Resources / Hazardous Waste Program P.O. Box 176 Jefferson City, MO 65102 (573) 522-9902

Dear Mr. Stroh,

Attached is the report associated with sixty-five (65) soil samples submitted for hexavalent chromium quantitation and conventionals (TOC, percent moisture, pH, and ORP) analyses on February 11, 2010. The samples were received on February 12, 2010 in sealed containers at ambient temperature. The submitted samples were extracted using EPA Method 3060A and then analyzed for hexavalent chromium via ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). All conventionals analyses were performed using established methods as described in this report. Any analytical issues associated with the analysis are addressed in the following report.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

Ben Wozniak Project Manager

Ben Wozniek

Applied Speciation and Consulting, LLC

## Applied Speciation and Consulting, LLC

## Report Prepared for:

Michael Stroh Missouri Department of Natural Resources / Hazardous Waste Program P.O. Box 176 Jefferson City, MO 65102

March 8, 2010

## 1. Sample Reception

Sixty-five (65) soil samples were submitted in wide-mouth glass jars (not provided by Applied Speciation and Consulting) for hexavalent chromium quantitation and conventionals (TOC, percent moisture, pH, and ORP) analyses on February 11, 2010. The samples were received in acceptable condition on February 12, 2010 in sealed containers at ambient temperature.

In accordance with approved EPA methodology, Applied Speciation and Consulting (ASC) recommends that all soils submitted for hexavalent chromium analysis remain at a temperature of ≤6°C prior to preparation and analysis.

All samples were received in a laminar flow clean hood void of trace metals contamination and ultra-violet radiation. Upon reception, all samples were designated discrete sample identifiers and then stored in a secure, monitored refrigerator (maintained at a temperature of  $\leq$ 4°C) until all preparatory and analytical procedures could be performed. Splits of each sample requesting TOC analysis were distributed to Amtest Inc.

It must be noted that the glass jar containing the sample identified as AB14474 shattered during transit to ASC. Consequently, no sample results could be provided for this particular sample. The client was contacted regarding this issue and instructed ASC to analyze the sample identified as AB14464 in place of the compromised sample.

## 2. Sample Preparation

All sample preparation is performed in laminar flow clean hoods known to be free from trace metals contamination. All applied water for dilutions and sample preservatives are monitored for contamination to account for any biases associated with the sample results.

<u>Hexavalent Chromium Quantification by IC-ICP-DRC-MS</u> Prior to analysis, all samples were extracted using EPA Method 3060A on either February 17<sup>th</sup> (Batches

C1 and C2) or February 18<sup>th</sup> (Batches C3 and C4). In summary, each sample was first spread into a thin layer onto a clean surface and a known mass of each sample was then weighed into a polypropylene centrifuge tube by taking approximately fifteen random subsamples of the original sample. A buffered alkaline extraction solution, MgCl<sub>2</sub>, and a phosphate buffer solution were then applied to each sample. All vials were then heated at 90-95°C in a sonicating bath for a minimum of one (1) hour. The resulting extracts were cooled, filtered, and injected directly into sealed autosampler vials prior to analysis for hexavalent chromium.

<u>pH and ORP Analyses</u> Prior to the analyses, all samples submitted for pH and ORP measurements were prepared in accordance with EPA Method 9045D on February 23, 2010. In summary, a known mass of each sample was placed into a polypropylene centrifuge tube and an equivalent mass of reagent water was also added. The resulting suspensions were shaken for five (5) minutes, after which each was briefly centrifuged and filtered (0.45μm) into a new centrifuge vial. Each sample extract was then analyzed for pH and ORP as described herein.

## 3. Sample Analysis

All sample analysis is preceded by a minimum of a five-point calibration curve spanning the entire concentration range of interest. Calibration curves are performed at the beginning of each analytical day. All calibration curves, associated with each species of interest, are standardized by linear regression resulting in a response factor. All sample results are **instrument blank corrected** to account for any operational biases associated with the analytical platform. All hexavalent chromium sample results have also been **dry-weight corrected** using the measured total solids (percent moisture) values.

Prior to sample analysis, all calibration curves are verified using second source standards which are identified as initial calibration verification standards (ICV).

Ongoing instrument performance is identified by the analysis of continuing calibration verification standards (CCV) and continuing calibration blanks (CCB) at a minimal interval of every ten analytical runs.

Hexavalent Chromium Quantitation by IC-ICP-DRC-MS All sample extracts for hexavalent chromium quantitation were analyzed via a modified version of EPA Method 7199 employing ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Aliquots of each sample are injected onto an anion exchange column and mobilized by an alkaline (pH > 7) gradient. The eluting chromium species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (DRC) containing a specific reactive gas which preferentially reacts with interfering ions of the same target mass to charge (m/z) ratios. A solid-state detector detects ions transmitted

through the mass analyzer, on the basis of their mass-to-charge ratio (m/z), and the resulting current is processed by a data handling system.

The retention time for hexavalent chromium is compared to known standards for species identification.

<u>Total Solids (Percent Moisture) Analysis</u> Approximately 1-2 grams of each sample was placed into a pre-weighed pan, and the combined mass of the sample and pan was recorded. All samples were then placed into a convection oven maintained at a temperature of 65-70°C. After drying for a minimum of eight (8) hours, all samples were briefly cooled and reweighed. The total solids percentage of each sample was calculated by dividing the weight of the dried sample by the weight of the original sample. All samples were prepared for total solids on either February 25, 2010 (Batches S1-S4) or on March 1, 2010 (Batch S5)

<u>pH Analysis</u> All sample extracts for pH measurement were analyzed in accordance with EPA Method 9045D on February 23, 2010.

<u>ORP Analysis</u> All sample extracts for ORP measurement were analyzed in accordance with ASTM D 1498-93 on February 23, 2010. All measured ORP values were corrected for the reference electrode in accordance with the guidance provided in EPA Method 3060A.

<u>TOC Analysis</u> All samples submitted for TOC measurements were analyzed via EPA Method 9060 on either February 23, 2010 (Batch T1) or on March 2, 2010 (Batch T2).

#### 4. Analytical Issues

Although the overall analyses went well, significant issues were encountered during the applied hexavalent chromium extraction procedure, as described below:

The RPD associated with the matrix duplicate (MD) performed on the sample identified as AB14426 was above the established control limit of 25% for Batch C2 (25.8%). The concentrations of hexavalent chromium in the parent sample and MD are both significantly greater than ten times the reporting limit (RL). Consequently, all samples associated with this batch were re-extracted and the RPD associated with the MD performed on AB14426 was still elevated (20.3%). Since the re-extraction and re-analysis did not take place until after the method-specified holding time of thirty (30) days had expired, the original results associated with Batch C2 have been reported despite the elevated MD RPD. The fact that the MD RPD for AB14426 was still elevated upon re-extraction suggests this sample matrix may be heterogeneous.

<u>Hexavalent Chromium Quantitation - Laboratory Control Samples</u> Three laboratory control samples were extracted with each batch of samples to identify the extraction efficiency and capacity of the extraction procedure to induce conversion of trivalent

chromium to hexavalent chromium. The laboratory control samples spiked with an aqueous hexavalent chromium and a solid PbCrO<sub>4</sub> standard produced acceptable recoveries for each batch (ranging from 95.3% to 111.1%), indicating that the applied method effectively extracts and stabilizes the hexavalent chromium species. The third laboratory control sample spiked with an aqueous trivalent chromium standard solution resulted in a hexavalent chromium recovery of less than 1.0% for each of the sample batches. The quantity of hexavalent chromium detected in these laboratory control samples is near that present in the associated preparation blanks, which is attributed to trace levels of hexavalent chromium in the reagents used for the extraction procedure. The low recoveries for the trivalent chromium spikes demonstrate that the extraction procedure, under ideal conditions, induces minimal conversion of trivalent to hexavalent chromium.

<u>Hexavalent Chromium Quantitation – Matrix Spike / Matrix Spike Duplicates</u> (<u>MS/MSDs</u>) Similar to the laboratory control samples, three discrete sets of matrix spikes were extracted with each batch to identify the interaction of the sample matrix with trivalent and hexavalent chromium. The performance of the matrix spikes can assist in identifying chemical interferences associated with the sample matrix and the applied extraction procedure.

<u>Hexavalent Chromium Quantitation – Cr(III) MS/MSDs</u> The hexavalent chromium recoveries associated with each aqueous trivalent chromium MS and MSD were less than 3%. These low trivalent chromium matrix spike recoveries confirm that the extraction procedure induces minimal oxidation of trivalent chromium to hexavalent chromium in the spiked sample matrices.

The RPD associated with the MSD performed for each of the four sample batches was above the established control limit of 25% (484.7%, 153.8%, 98.7%, and 45.3% respectively). These elevated RPDs are attributable to the fact that a minimal amount of the trivalent chromium spikes was converted to hexavalent chromium during the applied extraction procedure, as expected, resulting in hexavalent chromium concentrations that represented an increase in Cr(VI) less than the ambient sample concentration. Since greater variability is expected as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

<u>Hexavalent Chromium Quantitation – Aqueous Cr(VI) and Solid PbCrO<sub>4</sub> MS/MSDs</u> For Batches C1-C3, the hexavalent chromium recoveries associated with the aqueous Cr(VI) matrix spikes were all less than 2.0%. The recoveries associated with the insoluble Cr(VI) matrix spikes for each of these batches were also biased low (ranging from 63.0-76.7%). As previously mentioned, the recoveries of both the aqueous and insoluble hexavalent chromium LCS were acceptable for each of these batches, demonstrating that the applied procedure both extracts and stabilizes Cr(VI) in solution. Since the low bias observed for these soluble and insoluble Cr(VI) matrix spikes may therefore be attributed to interference from the spiked sample matrices, no

further corrective action was deemed necessary. These MS/MSD results suggest that the spiked sample matrix associated with each of these sample batches strongly favor reduction of hexavalent chromium. For Batch C1 this is further supported by the measured pH and ORP values obtained for the sample identified as AB14407, which indicate a reductive sample matrix, as well as the high TOC value (4.5%) for this sample.

The RPDs associated with the aqueous Cr(VI) MS/MSD sets performed for Batches C1-C3 were above the established control limit of 25% (342.7%, 872.8%, and 206.4%, respectively). As previously mentioned, the spiked sample matrix for each of these batches exhibited strongly reducing conditions (spike recoveries less than 2.0%), resulting in Cr(VI) concentrations for the MS and MSD that were less than twice the ambient sample concentrations. Since greater variability is expected as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14475 for Batch C4 were within acceptance limits for both the aqueous and insoluble hexavalent chromium matrix spikes. These acceptable recoveries suggest that the applied method effectively extracts and stabilizes hexavalent chromium in this particular sample matrix.

The estimated method detection limit (eMDL) for hexavalent chromium for each batch of solids is generated using the standard deviation of the associated preparation blanks, in accordance with Applied Speciation and Consulting's SOP.

If you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,

Ben Wozniak

Project Manager

Ben Wozniek

Applied Speciation and Consulting, LLC

# Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources Contact: Michael Stroh

Date: March 8, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

### Sample Results

	Batch	Date & Time	Cr(VI) in				
Sample ID	Identifiers	Analyzed for Cr(VI)*	mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	рН
AB14404	C1, S1, T1	2/17/2010 22:09	0.607	96.1	4.4	449	6.28
AB14405	C1, S1, T1	2/17/2010 22:15	0.418	96.4	4.1	433	6.85
AB14406	C1, S1, T1	2/17/2010 22:22	0.666	96.5	4.9	465	7.86
AB14407	C1, S1, T1	2/17/2010 22:40	1.05	93.8	4.5	477	5.90
AB14408	C1, S1, T1	2/17/2010 23:30	0.657	99.2	0.81	351	7.87
AB14409	C1, S1, T2	2/17/2010 23:37	0.225	98.5	0.47	352	7.87
AB14410	C1, S1, T1	2/17/2010 23:55	0.605	96.3	4.5	469	6.61
AB14411	C1, S1, T1	2/18/2010 0:08	0.833	96.2	5.5	407	6.62
AB14412	C1, S1, T1	2/18/2010 0:20	1.61	96.3	5.4	487	6.78
AB14413	C1, S1, T2	2/18/2010 11:08	0.069	98.7	4.4	420	6.45
AB14414	C1, S1, T2	2/18/2010 0:45	0.692	96.9	5.1	422	6.81
AB14415	C1, S1, T2	2/18/2010 0:52	0.793	97.5	6.4	468	5.91
AB14416	C1, S1, T2	2/18/2010 1:17	1.83	91.8	6.3	444	7.59
AB14417	C1, S1, T2	2/18/2010 1:23	1.11	97.1	1.3	475	6.34
AB14418	C1, S1, T2	2/18/2010 1:29	3.40	97.9	2.1	434	7.25
AB14419	C1, S1, T2	2/18/2010 1:35	3.29	98.3	2.2	422	7.38
AB14420	C1, S1, T1	2/18/2010 1:42	0.269	94.5	NR	NR	NR
AB14421	C1, S1, T1	2/18/2010 1:48	1.13	98.2	NR	NR	NR
AB14423	C1, S1, T1	2/18/2010 10:55	0.386	95.7	NR	NR	NR
AB14424	C1, S1, T1	2/18/2010 11:01	0.278	98.2	NR	NR	NR

dw = dry weight

NR = Not requested

<sup>\*</sup> Times reported in CST

<sup>\*\*</sup> ORP measurements corrected for reference electrode as specified in EPA Method 3060A

U = Sample concentration is less than the estimated Method Detection Limit (eMDL)

J = Sample concentration is between the eMDL and the Reporting Limit (RL)

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# Sample Results

	Batch	Date & Time	Cr(VI) in				
Sample ID	Identifiers	Analyzed for Cr(VI)*	mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	рН
AB14426	C2, S2	2/18/2010 12:10	0.406	97.7	NR	NR	NR
AB14427	C2, S2	2/18/2010 13:13	0.462	97.0	NR	NR	NR
AB14429	C2, S2	2/18/2010 13:19	1.27	98.8	NR	NR	NR
AB14430	C2, S2	2/18/2010 13:25	0.624	98.8	NR	NR	NR
AB14431	C2, S2	2/18/2010 13:31	0.626	97.5	NR	NR	NR
AB14432	C2, S2	2/18/2010 13:38	0.694	99.2	NR	NR	NR
AB14433	C2, S5	2/18/2010 13:56	1.56	98.8	NR	NR	NR
AB14435	C2, S2	2/18/2010 14:03	0.242	98.6	NR	NR	NR
AB14436	C2, S2	2/18/2010 14:09	0.803	98.6	NR	NR	NR
AB14438	C2, S2	2/18/2010 14:15	0.468	97.2	NR	NR	NR
AB14439	C2, S2	2/18/2010 14:21	1.10	98.0	NR	NR	NR
AB14440	C2, S2	2/18/2010 14:28	0.490	97.0	NR	NR	NR
AB14441	C2, S2	2/18/2010 14:34	1.54	98.4	NR	NR	NR
AB14442	C2, S2	2/18/2010 15:11	0.760	96.8	NR	NR	NR
AB14443	C2, S2	2/18/2010 15:18	0.703	96.8	NR	NR	NR
AB14444	C2, S2	2/18/2010 15:24	0.387	97.2	NR	NR	NR
AB14445	C2, S2	2/18/2010 15:30	0.240	98.6	NR	NR	NR
AB14446	C2, S2	2/18/2010 15:36	0.359	97.3	NR	NR	NR
AB14447	C2, S2	2/18/2010 15:43	0.728	97.5	NR	NR	NR
AB14448	C2, S2	2/18/2010 15:49	1.05	97.2	NR	NR	NR

dw = dry weight

NR = Not requested

<sup>\*</sup> Times reported in CST

<sup>\*\*</sup> ORP measurements corrected for reference electrode as specified in EPA Method 3060A

U = Sample concentration is less than the estimated Method Detection Limit (eMDL)

J = Sample concentration is between the eMDL and the Reporting Limit (RL)

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# Sample Results

	Batch	Date & Time	Cr(VI) in				
Sample ID	Identifiers	Analyzed for Cr(VI)*	mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	рН
AB14449	C3, S3	2/22/2010 15:45	1.73	97.4	NR	NR	NR
AB14450	C3, S3	2/22/2010 16:47	1.14	98.3	NR	NR	NR
AB14451	C3, S3	2/22/2010 16:53	1.58	96.8	NR	NR	NR
AB14453	C3, S3	2/22/2010 17:31	1.55	96.9	NR	NR	NR
AB14454	C3, S3	2/22/2010 17:37	0.821	98.5	NR	NR	NR
AB14455	C3, S3	2/22/2010 17:43	1.16	97.8	NR	NR	NR
AB14456	C3, S3	2/22/2010 17:50	1.19	98.5	NR	NR	NR
AB14457	C3, S3	2/22/2010 17:56	0.812	98.6	NR	NR	NR
AB14459	C3, S3	2/22/2010 18:02	1.04	99.0	NR	NR	NR
AB14460	C3, S3	2/22/2010 18:08	1.29	99.3	NR	NR	NR
AB14462	C3, S3	2/22/2010 18:15	2.45	97.9	NR	NR	NR
AB14463	C3, S3	2/22/2010 18:21	0.487	97.9	NR	NR	NR
AB14464	C3, S3	2/22/2010 19:23	1.64	98.2	NR	NR	NR
AB14465	C3, S3	2/22/2010 18:27	2.52	99.5	NR	NR	NR
AB14466	C3, S3	2/22/2010 18:46	2.52	99.6	NR	NR	NR
AB14468	C3, S3	2/22/2010 18:52	0.166	99.5	NR	NR	NR
AB14469	C3, S3	2/22/2010 18:58	0.296	99.1	NR	NR	NR
AB14470	C3, S3	2/22/2010 19:05	0.872	98.2	NR	NR	NR
AB14472	C3, S3	2/22/2010 19:11	0.234	98.9	NR	NR	NR
AB14473	C3, S3	2/22/2010 19:17	0.279	97.8	NR	NR	NR

dw = dry weight

NR = Not requested

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<sup>\*\*</sup> ORP measurements corrected for reference electrode as specified in EPA Method 3060A

U = Sample concentration is less than the estimated Method Detection Limit (eMDL)

J = Sample concentration is between the eMDL and the Reporting Limit (RL)

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# Sample Results

	Batch	Date & Time	Cr(VI) in				
Sample ID	Identifiers	Analyzed for Cr(VI)*	mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	рН
AB14475	C4, S4	2/22/2010 20:26	0.518	99.6	NR	NR	NR
AB14476	C4, S4	2/22/2010 21:28	2.27	99.4	NR	NR	NR
AB14477	C4, S4	2/22/2010 21:35	1.48	99.3	NR	NR	NR
AB14478	C4, S4, T2	2/22/2010 21:41	0.474	98.9	2.9	415	7.42
AB14479	C4, S4, T2	2/22/2010 21:47	1.36	99.6	1.3	397	7.66

dw = dry weight

NR = Not requested

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<sup>\*</sup> Times reported in CST

<sup>\*\*</sup> ORP measurements corrected for reference electrode as specified in EPA Method 3060A

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# **Quality Control Summary - Preparation Blank Summary**

Analyte	Units	Batch	PBS1	PBS2	PBS3	PBS4	Mean	StdDev	eMDL	RL
TOC	%	T1	< 0.05	-	-	-	-	-	-	0.05
TOC	%	T2	< 0.05	-	-	-	-	-	-	0.05
Cr(VI)	mg/kg (dw)	C1	0.020	0.021	0.022	0.025	0.022	0.002	0.006	0.025
Cr(VI)	mg/kg (dw)	C2	0.021	0.017	0.016	0.014	0.017	0.003	0.008	0.025
Cr(VI)	mg/kg (dw)	C3	0.021	0.021	0.022	0.023	0.022	0.001	0.002	0.025
Cr(VI)	mg/kg (dw)	C4	0.031	0.024	0.021	0.019	0.024	0.005	0.015	0.025

eMDL = Estimated Method Detection Limit

RL = Reporting Limit

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# **Quality Control Summary - Laboratory Control Samples**

Analyte	Units	Batch	LCS	True Value	Result	Recovery
TOC	%	T1	LCS	1.3	1.3	100
TOC	%	T2	LCS	1.3	1.4	108
Cr(III)	mg/kg (dw)	C1	LCS	5.000	0.019	0.4
Cr(VI)	mg/kg (dw)	C1	LCS	5.000	5.557	111.1
PbCrO <sub>4</sub>	mg/kg (dw)	C1	LCS	6692	7332	109.6
Cr(III)	mg/kg (dw)	C2	LCS	5.000	0.021	0.4
Cr(VI)	mg/kg (dw)	C2	LCS	5.000	4.986	99.7
PbCrO <sub>4</sub>	mg/kg (dw)	C2	LCS	6628	6317	95.3
Cr(III)	mg/kg (dw)	C3	LCS	5.000	0.027	0.5
Cr(VI)	mg/kg (dw)	C3	LCS	5.000	5.474	109.5
PbCrO <sub>4</sub>	mg/kg (dw)	C3	LCS	6789	7005	103.2
Cr(III)	mg/kg (dw)	C4	LCS	5.000	0.033	0.7
Cr(VI)	mg/kg (dw)	C4	LCS	5.000	5.445	108.9
PbCrO <sub>4</sub>	mg/kg (dw)	C4	LCS	6049	6343	104.9

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# **Quality Control Summary - Matrix Duplicate**

Analyte	Units	Batch	Sample ID	Rep 1	Rep 2	Mean	RPD
TOC	%	T1	AB14410	4.5	4.3	4.4	4.5
TOC	%	T2	AB14419	2.2	2.2	2.2	0.0
% Solids	%	S1	AB14404	96.05	96.10	96.08	0.1
% Solids	%	S2	AB14426	97.67	97.75	97.71	0.1
% Solids	%	S3	AB14449	97.45	97.55	97.50	0.1
% Solids	%	S4	AB14475	99.55	99.51	99.53	0.0
% Solids	%	S5	AB14433	98.82	98.82	98.82	0.0
Cr(VI)	mg/kg (dw)	C1	AB14407	1.051	0.942	0.997	11.0
Cr(VI)	mg/kg (dw)	C1	AB14410	0.605	0.750	0.677	21.4
Cr(VI)	mg/kg (dw)	C1	AB14411	0.833	0.788	0.811	5.6
Cr(VI)	mg/kg (dw)	C1	AB14412	1.613	1.620	1.617	0.4
Cr(VI)	mg/kg (dw)	C1	AB14413	0.069	0.080	0.075	15.0
Cr(VI)	mg/kg (dw)	C1	AB14415	0.793	0.775	0.784	2.3
Cr(VI)	mg/kg (dw)	C2	AB14426	0.406	0.526	0.466	25.8*
Cr(VI)	mg/kg (dw)	C3	AB14449	1.729	1.408	1.568	20.5
Cr(VI)	mg/kg (dw)	C4	AB14475	0.518	0.434	0.476	17.6

NC = Value was not calculated due to one or more concentrations below the eMDL

<sup>\*</sup> The RPD is above the established control limit of 25%; please see narrative.

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#### Quality Control Summary - Matrix Spike/ Matrix Spike Duplicate

								MSD		
Analyte	Units	Batch	Sample ID	Spike Conc	MS Result	Recovery	Spike Conc	Result	Recovery	RPD
Cr(III)	mg/kg (dw)	C1	AB14407	5.247	1.078	1.5	5.253	0.963	-0.6	484.7**
Cr(VI)	mg/kg (dw)	C1	AB14407	5.310	0.758	-4.5*	5.319	1.060	1.2*	342.7**
PbCrO <sub>4</sub>	mg/kg (dw)	C1	AB14407	7770	5962	76.7	7752	5644	72.8*	5.3
Cr(III)	mg/kg (dw)	C2	AB14426	5.052	0.464	0.0	5.150	0.451	-0.3	153.8**
Cr(VI)	mg/kg (dw)	C2	AB14426	5.064	0.427	-0.8*	5.068	0.528	1.2*	872.8**
PbCrO <sub>4</sub>	mg/kg (dw)	C2	AB14426	6915	4630	66.9*	6961	4666	67.0*	0.1
Cr(III)	mg/kg (dw)	C3	AB14449	4.909	1.709	2.9	4.971	1.617	1.0	98.7**
Cr(VI)	mg/kg (dw)	C3	AB14449	5.151	1.153	-8.1*	5.133	1.575	0.1*	206.4**
PbCrO <sub>4</sub>	mg/kg (dw)	C3	AB14449	5866	3694	63.0*	6003	3832	63.8*	1.3
Cr(III)	mg/kg (dw)	C4	AB14475	4.934	0.503	0.6	4.996	0.520	0.9	45.3**
Cr(VI)	mg/kg (dw)	C4	AB14475	4.838	5.336	100.5	4.953	5.520	101.8	1.4
PbCrO <sub>4</sub>	mg/kg (dw)	C4	AB14475	6088	6104	100.3	6391	6436	100.7	0.4

<sup>\*</sup> The recovery is below the established control limit of 75%; please see narrative.

NC = Value was not calculated due to one or more concentrations below the eMDL

<sup>\*\*</sup> The RPD is above the established control limit of 25%; please see narrative.

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# **Quality Control Summary - Historical Calibration Standards**

Cr(VI) True	Cr(VI) Measured	Percent
Value	Result	Recovery
0.050	0.079	158.8
0.050	0.072	143.1
0.050	0.082	163.6
0.050	0.073	146.2
0.500	0.550	110.0
5.000	5.174	103.5
50.00	49.98	100.0
0.050	0.057	114.7
0.050	0.056	112.0
0.050	0.060	120.6
0.050	0.064	127.8
0.500	0.499	99.7
5.000	5.055	101.1
25.00	24.98	99.9
0.050	0.047	93.7
0.050	0.050	100.9
0.050	0.041	81.4
0.050	0.043	85.8
0.500	0.484	96.7
5.000	4.891	97.8
25.00	23.51	94.0

All results are reported in µg/L

Date: March 8, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

# **Quality Control Summary - Historical CCV Standards**

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
5.000	5.585	111.7
5.000	5.470	109.4
5.000	5.353	107.1
5.000	5.516	110.3
5.000	5.358	107.2
5.000	5.072	101.4
5.000	4.978	99.6
5.000	4.932	98.6
5.000	4.861	97.2
5.000	4.888	97.8
5.000	4.882	97.6
5.000	4.815	96.3
5.000	5.348	107.0
5.000	5.274	105.5
5.000	5.229	104.6
5.000	5.338	106.8
5.000	5.418	108.4
5.000	5.485	109.7
5.000	5.444	108.9
5.000	5.437	108.7

CCV = Continuing Calibration Verification

All results are reported in µg/L

Date: March 8, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

# **Quality Control Summary - Historical Second Source Standards**

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
4.000	3.795	94.9
200.0	218.7	109.4
202.0	214.0	105.9
10.00	12.09	120.9
5.000	5.495	109.9
5.000	5.107	102.1
100.0	95.38	95.4
5.000	4.932	98.6
5.000	4.706	94.1
20.00	20.30	101.5
5.000	5.029	100.6
100.0	107.2	107.2
5.000	5.369	107.4
5.000	5.557	111.1
5.000	4.986	99.7
5.000	5.474	109.5
5.000	5.445	108.9
5.000	4.546	90.9

Second source standard = Cr(VI) Blank Spike (from 3060A Extraction)
All results are reported in mg/kg

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# **Quality Control Summary - Historical Matrix Spikes**

		MS			MSD		
Ambient	MS Spike	Measured	MS	MSD Spike	Measured	MSD	
Cr(VI) Conc.	Conc.	Result	Recovery	Conc.	Result	Recovery	RPD
3.647	4.009	6.202	63.7	4.061	6.469	69.5	8.7
2.961	221.2	257.4	115.0	209.2	216.7	102.1	11.9
2.853	150.2	167.7	109.8	226.2	243.7	106.4	3.1
0.118	43.67	44.23	101.0	54.70	53.27	97.2	3.9
0.077	4.976	3.343	65.6	5.124	3.790	72.5	9.9
126.8	867.7	947.6	94.6	765.2	834.1	92.4	2.3
0.187	4.046	3.095	71.9	3.775	2.961	73.5	2.2
0.160	4.017	4.214	100.9	4.078	4.038	95.1	5.9
0.080	3.906	3.657	91.6	3.959	3.600	88.9	2.9
0.101	5.052	3.646	70.2	4.694	3.300	68.2	2.9
0.224	4.910	2.551	47.4	4.893	2.361	43.7	8.2
0.342	4.885	3.534	65.4	4.820	3.424	63.9	2.2
< 0.014 U	5.243	< 0.014 U	0.0	5.147	0.039	0.8	200.0
1.816	20.46	6.685	23.8	20.39	5.832	19.7	18.8
0.088	5.064	3.253	62.5	5.134	3.254	61.7	1.3
0.997	5.310	0.758	-4.5	5.319	1.060	1.2	342.7
0.466	5.064	0.427	-0.8	5.068	0.528	1.2	872.8
0.184	5.007	4.098	78.1	4.779	4.272	85.5	9.0
1.568	5.151	1.153	-8.1	5.133	1.575	0.1	206.4
0.476	4.838	5.336	100.5	4.953	5.520	101.8	1.4

All results are reported in mg/kg



March 4, 2010

Michael Stroh Missouri Department of Natural Resources / Hazardous Waste Program P.O. Box 176 Jefferson City, MO 65102 (573) 522-9902

Dear Mr. Stroh,

Attached is the report associated with sixty (60) soil samples submitted for hexavalent chromium quantitation on February 3, 2010. The samples were received on February 4, 2010 in sealed coolers at 1.7°C and 2.9°C, respectively. The submitted samples were extracted using EPA Method 3060A and then analyzed for hexavalent chromium via ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Any analytical issues associated with the analysis are addressed in the following report.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

Ben Wozniak Project Manager

Ben Wozniek

Applied Speciation and Consulting, LLC

# Applied Speciation and Consulting, LLC

## Report Prepared for:

Michael Stroh Missouri Department of Natural Resources / Hazardous Waste Program P.O. Box 176 Jefferson City, MO 65102

March 4, 2010

# 1. Sample Reception

Sixty (60) soil samples were submitted in wide-mouth glass jars (not provided by Applied Speciation and Consulting) for hexavalent chromium quantitation on February 3, 2010. The samples were received in acceptable condition on February 4, 2010 in sealed coolers at 1.7°C and 2.9°C, respectively.

All samples were received in a laminar flow clean hood void of trace metals contamination and ultra-violet radiation. Upon reception, all samples were designated discrete sample identifiers and then stored in a secure, monitored refrigerator (maintained at a temperature of  $\leq 4^{\circ}$ C) until all preparatory and analytical procedures could be performed.

#### 2. Sample Preparation

All sample preparation is performed in laminar flow clean hoods known to be free from trace metals contamination. All applied water for dilutions and sample preservatives are monitored for contamination to account for any biases associated with the sample results.

<u>Hexavalent Chromium Quantification by IC-ICP-DRC-MS</u> Prior to analysis, all samples were extracted using EPA Method 3060A on February 8<sup>th</sup> (Batch 1), February 16<sup>th</sup> (Batch 2), and February 9<sup>th</sup> (Batch 3). In summary, each sample was first spread into a thin layer onto a clean surface and a known mass of each sample was then weighed into a polypropylene centrifuge tube by taking approximately fifteen random subsamples of the original sample. A buffered alkaline extraction solution, MgCl<sub>2</sub>, and a phosphate buffer solution were then applied to each sample. All vials were then heated at 90-95°C in a sonicating bath for a minimum of one (1) hour. The resulting extracts were cooled, filtered, and injected directly into sealed autosampler vials prior to analysis for hexavalent chromium.

#### 3. Sample Analysis

All sample analysis is preceded by a minimum of a five-point calibration curve spanning the entire concentration range of interest. Calibration curves are performed at the beginning of each analytical day. All calibration curves, associated with each species of interest, are standardized by linear regression resulting in a response factor. All sample results are **instrument blank corrected** to account for any operational biases associated with the analytical platform. All sample results have also been **dry-weight corrected** using the measured total solids (percent moisture) values.

Prior to sample analysis, all calibration curves are verified using second source standards which are identified as initial calibration verification standards (ICV).

Ongoing instrument performance is identified by the analysis of continuing calibration verification standards (CCV) and continuing calibration blanks (CCB) at a minimal interval of every ten analytical runs.

Hexavalent Chromium Quantitation by IC-ICP-DRC-MS All sample extracts for hexavalent chromium quantitation were analyzed via a modified version of EPA Method 7199 employing ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Aliquots of each sample are injected onto an anion exchange column and mobilized by an alkaline (pH > 7) gradient. The eluting chromium species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (DRC) containing a specific reactive gas which preferentially reacts with interfering ions of the same target mass to charge (m/z) ratios. A solid-state detector detects ions transmitted through the mass analyzer, on the basis of their mass-to-charge ratio (m/z), and the resulting current is processed by a data handling system.

The retention time for hexavalent chromium is compared to known standards for species identification.

<u>Total Solids Analysis</u> Approximately 1-2 grams of each sample was placed into a preweighed pan, and the combined mass of the sample and pan was recorded. All samples were then placed into a convection oven maintained at a temperature of 65-70°C. After drying for a minimum of eight (8) hours, all samples were briefly cooled and reweighed. The total solids percentage of each sample was calculated by dividing the weight of the dried sample by the weight of the original sample.

#### 4. Analytical Issues

Although the overall analyses went well, significant issues were encountered during the applied extraction procedure, as described below:

The RPD associated with the matrix duplicate (MD) performed on the sample identified as AB14310 was above the established control limit of 25% for batch 2 (28.7%). The concentrations of hexavalent chromium in the parent sample and MD are both less than ten times the reporting limit (RL), with the absolute difference between the two values being approximately twice the RL. Since greater variability is expected as sample concentrations approach the RL, the elevated RPD is identified as an inherent limitation of any quantitative method and does not impact the validity of the reported results.

It must be noted that although the client requested an additional matrix duplicate (MD) be performed on the sample identified as AB14321, this duplicate set was mistakenly not included in the digestion batch associated with this sample, *i.e.* batch 2. Batch 2 did include three other MD sets, however, so the variability associated with the extractions and analyses are demonstrated via these MDs. By the time Applied Speciation and Consulting (ASC) was able to re-extract AB14321 with the additional MD set that was requested, the sample had exceeded the recommended holding time of thirty (30) days specified in EPA Method 3060A; rather than report data generated outside the holding time, ASC has reported the initial result obtained for this sample.

Hexavalent Chromium Quantitation - Laboratory Control Samples Three laboratory control samples were extracted with each batch of samples to identify the extraction efficiency and capacity of the extraction procedure to induce conversion of trivalent chromium to hexavalent chromium. The laboratory control samples spiked with an aqueous hexavalent chromium and a solid PbCrO<sub>4</sub> standard produced acceptable recoveries for each batch (ranging from 93.4% to 107.4%), indicating that the applied method effectively extracts and stabilizes the hexavalent chromium species. The third laboratory control sample spiked with an aqueous trivalent chromium standard solution resulted in a hexavalent chromium recovery of less than 1.0% for each of the sample batches. The quantity of hexavalent chromium detected in these laboratory control samples is near that present in the associated preparation blanks, which is attributed to trace levels of hexavalent chromium in the reagents used for the The low recoveries for the trivalent chromium spikes extraction procedure. demonstrate that the extraction procedure, under ideal conditions, induces minimal conversion of trivalent to hexavalent chromium.

<u>Hexavalent Chromium Quantitation – Matrix Spike / Matrix Spike Duplicates</u> (<u>MS/MSDs</u>) Similar to the laboratory control samples, three discrete sets of matrix spikes were extracted with each batch to identify the interaction of the sample matrix with trivalent and hexavalent chromium. The performance of the matrix spikes can assist in identifying chemical interferences associated with the sample matrix and the applied extraction procedure.

<u>Hexavalent Chromium Quantitation - Cr(III) MS/MSDs</u> The hexavalent chromium recoveries associated with each aqueous trivalent chromium MS and MSD were less than 3%. These low trivalent chromium matrix spike recoveries confirm that the

extraction procedure induces minimal oxidation of trivalent chromium to hexavalent chromium in the spiked sample matrices.

The RPD associated with the MSD performed for each of the three sample batches was above the established control limit of 25% (71.4%, 93.1%, and 87.3%, respectively). These elevated RPDs are attributable to the fact that a minimal amount of the trivalent chromium spikes was converted to hexavalent chromium during the applied extraction procedure, as expected, resulting in hexavalent chromium concentrations that either were either less than ten times the RL (as is the case for batch 1) or represented an increase in Cr(VI) that was less than two times the ambient sample concentration (as is the case for batches 2 and 3). Since greater variability is expected as sample concentrations approach the RL and as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

<u>Hexavalent Chromium Quantitation – Aqueous Cr(VI) and Solid PbCrO<sub>4</sub> MS/MSDs</u> The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14310 for batch 2 were within acceptance limits for both the aqueous (78.1% and 85.5%) and insoluble (90.6% and 91.2%) hexavalent chromium matrix spikes. These acceptable recoveries suggest that the applied method effectively extracts and stabilizes hexavalent chromium in this particular sample matrix.

The hexavalent chromium recoveries associated with the insoluble Cr(VI) matrix spikes performed on the sample identified as AB14333 for batch 3 were within established control limits (85.0% and 81.6%), whereas the recoveries of the aqueous Cr(VI) matrix spikes performed on this sample were biased low (62.5% and 61.7%). As previously mentioned, the recoveries of both the aqueous and insoluble hexavalent chromium LCS were within acceptance limits for this batch (100.6% and 95.7%, respectively), demonstrating that the applied procedure both extracts and stabilizes Cr(VI) in solution. Since the low bias observed for these aqueous Cr(VI) matrix spikes may therefore be attributed to interference from the sample matrix, no further corrective action was deemed necessary. These MS/MSD results suggest that the matrix of AB14333 favors reduction of hexavalent chromium.

The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14289 for batch 1 were biased low for both the aqueous (0.0% and 0.8%) and the insoluble (67.4% and 68.4%) spikes. The recoveries of the aqueous and insoluble hexavalent chromium LCS were within acceptance limits for this batch (94.1% and 93.4%, respectively), again demonstrating that the method extracts and stabilizes Cr(VI) in solution. The low recoveries observed are therefore attributed to interference from the matrix of AB14289 and indicate that this sample strongly favors reduction of Cr(VI). Since all other quality control parameters associated with this batch were within control, no corrective action was deemed necessary.

The estimated method detection limit (eMDL) for hexavalent chromium for each batch of solids is generated using the standard deviation of the associated preparation blanks, in accordance with Applied Speciation and Consulting's SOP.

If you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,

Ben Wozniak

Project Manager

Ben Wozniek

Applied Speciation and Consulting, LLC

Date: March 4, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

# Sample Results

	Batch	Date & Time	Cr(VI) in	
Sample ID	Identifier	Analyzed for Cr(VI)*	mg/kg (dw)	% Solids
AB14289	1	2/8/2010 18:34	< 0.014 U	97.4
AB14290	1	2/8/2010 19:26	0.022 J	99.6
AB14291	1	2/8/2010 19:32	0.019 J	96.0
AB14292	1	2/8/2010 20:03	0.069	88.4
AB14293	1	2/8/2010 20:09	< 0.014 U	96.3
AB14294	1	2/8/2010 20:19	0.063	99.4
AB14295	1	2/8/2010 20:24	0.163	99.5
AB14296	1	2/8/2010 20:30	0.061	99.6
AB14297	1	2/8/2010 20:35	0.066	99.7
AB14298	1	2/8/2010 20:40	0.319	97.7
AB14299	1	2/8/2010 20:46	0.035	98.8
AB14300	1	2/8/2010 20:51	0.025	99.4
AB14301	1	2/8/2010 21:07	0.293	99.2
AB14302	1	2/8/2010 21:12	0.106	98.6
AB14303	1	2/8/2010 21:17	0.111	95.2
AB14304	1	2/8/2010 21:23	0.053	95.5
AB14305	1	2/8/2010 21:33	0.069	93.7
AB14306	1	2/8/2010 21:38	0.052	95.1
AB14307	1	2/8/2010 21:44	0.068	95.1
AB14308	1	2/8/2010 21:49	0.116	96.6

dw = dry weight

<sup>\*</sup> Times reported in CST

Date: March 4, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

# Sample Results

	Batch	Date & Time	Cr(VI) in	
Sample ID	Identifier	Analyzed for Cr(VI)*	mg/kg (dw)	% Solids
AB14309	2	2/17/2010 14:14	0.098	96.9
AB14310	2	2/17/2010 14:20	0.211	98.2
AB14311	2	2/17/2010 15:23	0.277	93.9
AB14312	2	2/17/2010 16:00	0.217	96.4
AB14313	2	2/17/2010 16:07	0.081	98.1
AB14314	2	2/17/2010 16:13	0.094	97.9
AB14315	2	2/17/2010 16:19	0.086	94.6
AB14316	2	2/17/2010 16:25	0.078	97.1
AB14317	2	2/17/2010 16:32	0.484	94.9
AB14318	2	2/17/2010 16:38	0.118	96.7
AB14319	2	2/17/2010 16:50	0.763	96.1
AB14320	2	2/17/2010 16:57	0.195	94.2
AB14321	2	2/17/2010 17:15	0.180	95.6
AB14322	2	2/17/2010 17:22	0.059	98.6
AB14323	2	2/17/2010 17:28	0.108	89.7
AB14324	2	2/17/2010 17:34	0.076	93.2
AB14325	2	2/17/2010 17:40	0.076	93.5
AB14326	2	2/17/2010 17:47	0.071	94.3
AB14327	2	2/17/2010 17:59	0.057	98.0
AB14328	2	2/17/2010 18:05	0.054	97.7

dw = dry weight

<sup>\*</sup> Times reported in CST

Date: March 4, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

# Sample Results

	Batch	Date & Time	Cr(VI) in	
Sample ID	Identifier	Analyzed for Cr(VI)*	mg/kg (dw)	% Solids
AB14329	3	2/9/2010 20:14	0.106	96.8
AB14330	3	2/9/2010 20:19	0.061	98.2
AB14331	3	2/9/2010 20:24	0.156	99.1
AB14332	3	2/9/2010 20:40	0.117	93.4
AB14333	3	2/9/2010 20:45	0.087	97.6
AB14334	3	2/9/2010 21:27	0.049	95.1
AB14335	3	2/9/2010 21:43	0.042	96.6
AB14336	3	2/9/2010 21:49	0.058	95.1
AB14337	3	2/9/2010 21:54	0.036	97.1
AB14338	3	2/9/2010 21:59	0.054	96.1
AB14339	3	2/9/2010 22:04	0.139	98.9
AB14340	3	2/9/2010 22:10	0.206	99.1
AB14341	3	2/9/2010 22:15	0.220	94.2
AB14342	3	2/9/2010 22:20	0.192	97.5
AB14343	3	2/9/2010 22:26	0.098	98.4
AB14344	3	2/9/2010 22:31	0.115	94.0
AB14345	3	2/9/2010 22:47	0.100	98.8
AB14346	3	2/9/2010 22:57	0.057	98.9
AB14347	3	2/9/2010 23:03	0.093	97.8
AB14348	3	2/9/2010 23:08	0.116	97.2

dw = dry weight

<sup>\*</sup> Times reported in CST

Date: March 4, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

# **Quality Control Summary - Preparation Blank Summary**

Analyte	Units	Batch	PBS1	PBS2	PBS3	PBS4	Mean	StdDev	eMDL	RL
Cr(VI)	mg/kg (dw)	1	0.010	0.020	0.012	0.016	0.015	0.004	0.013	0.025
Cr(VI)	mg/kg (dw)	2	0.021	0.023	0.022	0.020	0.022	0.001	0.004	0.025
Cr(VI)	mg/kg (dw)	3	0.015	0.019	0.015	0.015	0.016	0.002	0.006	0.025

eMDL = Estimated Method Detection Limit

RL = Reporting Limit

# **Quality Control Summary - Laboratory Control Samples**

Analyte	Units	Batch	LCS	True Value	Result	Recovery
Cr(VI)	mg/kg (dw)	1	LCS	5.000	4.706	94.1
Cr(III)	mg/kg (dw)	1	LCS	5.000	0.020	0.4
PbCrO <sub>4</sub>	mg/kg (dw)	1	LCS	6886	6430	93.4
Cr(VI)	mg/kg (dw)	2	LCS	5.000	5.369	107.4
Cr(III)	mg/kg (dw)	2	LCS	5.000	0.045	0.9
PbCrO <sub>4</sub>	mg/kg (dw)	2	LCS	6532	6791	104.0
Cr(VI)	mg/kg (dw)	3	LCS	5.000	5.029	100.6
Cr(III)	mg/kg (dw)	3	LCS	5.000	0.023	0.5
PbCrO <sub>4</sub>	mg/kg (dw)	3	LCS	6113	5851	95.7

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# **Quality Control Summary - Matrix Duplicate**

Analyte	Units	Batch	Sample ID	Rep 1	Rep 2	Mean	RPD
% Solids	%	1	AB14289	97.38	97.55	97.46	0.2
% Solids	%	1	AB14307	95.13	95.19	95.16	0.1
Cr(VI)	mg/kg (dw)	1	AB14293	< 0.014 U	< 0.014 U	NC	NC
Cr(VI)	mg/kg (dw)	1	AB14304	0.053	0.043	0.048	20.4
Cr(VI)	mg/kg (dw)	1	AB14289	< 0.014 U	< 0.014 U	NC	NC
% Solids	%	2	AB14327	98.05	98.20	98.13	0.2
Cr(VI)	mg/kg (dw)	2	AB14318	0.118	0.144	0.131	20.2
Cr(VI)	mg/kg (dw)	2	AB14326	0.071	0.066	0.068	8.1
Cr(VI)	mg/kg (dw)	2	AB14310	0.211	0.158	0.184	28.7*
Cr(VI)	mg/kg (dw)	3	AB14345	0.100	0.081	0.090	21.6
% Solids	%	3	AB14347	97.84	97.87	97.86	0.0
Cr(VI)	mg/kg (dw)	3	AB14333	0.087	0.088	0.088	1.3

NC = Value was not calculated due to one or more concentrations below the eMDL

<sup>\*</sup> The RPD is above the established control limit of 25%; please see narrative.

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### Quality Control Summary - Matrix Spike/ Matrix Spike Duplicate

								MSD		
Analyte	Units	Batch	Sample ID	Spike Conc	MS Result	Recovery	Spike Conc	Result	Recovery	RPD
Cr(III)	mg/kg (dw)	1	AB14289	5.192	0.032	0.6	5.234	0.015	0.3	71.4**
Cr(VI)	mg/kg (dw)	1	AB14289	5.243	< 0.014 U	0.0*	5.147	0.039	0.8*	NC
PbCrO <sub>4</sub>	mg/kg (dw)	1	AB14289	6810	4589	67.4*	7578	5181	68.4*	1.4
Cr(III)	mg/kg (dw)	2	AB14310	4.923	0.212	0.6	5.058	0.262	1.5	93.1**
Cr(VI)	mg/kg (dw)	2	AB14310	5.007	4.098	78.1	4.779	4.272	85.5	9.0
PbCrO <sub>4</sub>	mg/kg (dw)	2	AB14310	6683	6058	90.6	6280	5725	91.2	0.6
Cr(III)	mg/kg (dw)	3	AB14333	5.105	0.144	1.1	5.117	0.231	2.8	87.3**
Cr(VI)	mg/kg (dw)	3	AB14333	5.064	3.253	62.5*	5.134	3.254	61.7*	1.3
PbCrO <sub>4</sub>	mg/kg (dw)	3	AB14333	7865	6689	85.0	7675	6265	81.6	4.1

<sup>\*</sup> The recovery is below the established control limit of 75%; please see narrative.

NC = Value was not calculated due to one or more concentrations below the eMDL

<sup>\*\*</sup> The RPD is above the established control limit of 25%; please see narrative.

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# **Quality Control Summary - Historical Calibration Standards**

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
0.050	0.053	106.7
0.050	0.056	112.3
0.050	0.067	134.5
0.050	0.052	103.6
0.500	0.501	100.2
5.000	4.929	98.6
25.00	24.24	96.9
0.050	0.057	114.7
0.050	0.056	112.0
0.050	0.060	120.6
0.050	0.064	127.8
0.500	0.499	99.7
5.000	5.055	101.1
25.00	24.98	99.9
0.050	0.068	135.5
0.050	0.066	132.2
0.050	0.060	119.9
0.050	0.069	137.7
0.500	0.537	107.4
5.000	4.935	98.7
25.00	24.89	99.6

All results are reported in µg/L

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# **Quality Control Summary - Historical CCV Standards**

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
5.000	5.179	103.6
5.000	5.177	103.5
5.000	5.458	109.2
5.000	5.673	113.5
5.000	5.220	104.4
5.000	5.560	111.2
5.000	4.301	86.0
5.000	5.018	100.4
5.000	4.981	99.6
5.000	5.127	102.5
5.000	4.998	100.0
5.000	5.089	101.8
5.000	5.384	107.7
5.000	5.417	108.3
5.000	5.479	109.6
5.000	5.533	110.7
5.000	4.322	86.4
5.000	4.973	99.5
5.000	5.084	101.7
5.000	5.144	102.9

CCV = Continuing Calibration Verification

All results are reported in µg/L

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# **Quality Control Summary - Historical Second Source Standards**

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
20.00	19.73	98.7
20.00	20.04	100.2
200.0	204.6	102.3
4.000	3.795	94.9
200.0	218.7	109.4
202.0	214.0	105.9
10.00	12.09	120.9
5.000	5.495	109.9
5.000	5.107	102.1
100.0	95.38	95.4
5.000	4.932	98.6
5.000	4.706	94.1
20.00	20.30	101.5
5.000	5.029	100.6
100.0	107.2	107.2
5.000	5.369	107.4
5.000	5.557	111.1
5.000	4.986	99.7

Second source standard = Cr(VI) Blank Spike (from 3060A Extraction)
All results are reported in mg/kg

Date: March 4, 2010 Report Generated by: Ben Wozniak Applied Speciation and Consulting, LLC

# **Quality Control Summary - Historical Matrix Spikes**

		MS			MSD		
Ambient	MS Spike	Measured	MS	MSD Spike	Measured	MSD	
Cr(VI) Conc.	Conc.	Result	Recovery	Conc.	Result	Recovery	RPD
0.003	18.72	0.126	0.7	19.48	0.125	0.6	5.1
131.4	40.07	179.8	120.9	38.99	164.2	84.1	35.9
0.070	18.83	0.214	8.0	18.42	1.851	9.7	170.7
1.351	163.9	162.5	98.3	266.7	282.0	105.2	6.8
3.647	4.009	6.202	63.7	4.061	6.469	69.5	8.7
2.961	221.2	257.4	115.0	209.2	216.7	102.1	11.9
2.853	150.2	167.7	109.8	226.2	243.7	106.4	3.1
0.118	43.67	44.23	101.0	54.70	53.27	97.2	3.9
0.077	4.976	3.343	65.6	5.124	3.790	72.5	9.9
126.8	867.7	947.6	94.6	765.2	834.1	92.4	2.3
0.187	4.046	3.095	71.9	3.775	2.961	73.5	2.2
0.160	4.017	4.214	100.9	4.078	4.038	95.1	5.9
0.080	3.906	3.657	91.6	3.959	3.600	88.9	2.9
0.101	5.052	3.646	70.2	4.694	3.300	68.2	2.9
0.224	4.910	2.551	47.4	4.893	2.361	43.7	8.2
0.342	4.885	3.534	65.4	4.820	3.424	63.9	2.2
< 0.014 U	5.243	< 0.014 U	0.0	5.147	0.039	8.0	200.0
1.816	20.46	6.685	23.8	20.39	5.832	19.7	18.8
0.088	5.064	3.253	62.5	5.134	3.254	61.7	1.3
0.184	5.007	4.098	78.1	4.779	4.272	85.5	9.0

All results are reported in mg/kg